

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 1T3
Bid Fax: (902) 496-5016

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

Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9

Title - Sujet CCGS SIGMA REFIT	
Solicitation No. - N° de l'invitation F5561-135236/A	Date 2013-07-16
Client Reference No. - N° de référence du client F5561-13-5236	GETS Ref. No. - N° de réf. de SEAG PW-\$HAL-403-9035
File No. - N° de dossier HAL-3-71080 (403)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-08-06	
Time Zone Fuseau horaire Atlantic Daylight Saving Time ADT	
F.O.B. - F.A.B.	
Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Brow, Theresa	Buyer Id - Id de l'acheteur hal403
Telephone No. - N° de téléphone (902) 496-5166 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF FISHERIES AND OCEANS CANOPY-MARINE ENGINEERING WORKSHOP BIO - 1 CHALLENGER DR., V-G-28 DARTMOUTH NOVA SCOTIA B2Y4A2 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	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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PART 1 - GENERAL INFORMATION

1. Introduction

The bid solicitation is divided into seven parts plus attachments and 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;
- 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, 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 Statement of Work, the Basis of Payment, the Insurance Requirements, and any other annexes.

2. Summary

The Contractor must:

- a. carry out the maintenance and alterations of the Department of Fisheries and Oceans vessel CCGS Sigma T in accordance with the Requirement at Annex A.
- b. carry out any approved unscheduled work not covered in the above paragraph (a).

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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

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 (2013-06-01) Standard Instructions - Goods or Services - Competitive Requirements are incorporated by reference into and form part of the bid solicitation.

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.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than Five (5) 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.

4. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Nova Scotia.

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.

5. Bidders' Conference

N/A

6. Optional Vessel Visit

It is recommended that the Bidder or a representative of the Bidder visit the work site. Arrangements have been made for a tour of the work site. The site visit will be held on July 26, 2013 at 1000 hrs local onboard the vessel. Bidders are requested to communicate with the Contracting Authority two (2) days before the scheduled visit to confirm attendance and provide the name(s) of the person(s) who will attend. Bidders who do not attend or send a representative will not be given an alternative appointment but they will not be precluded from submitting a bid. Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation.

A9038T (2006-06-16)

7. Work Period - Marine

Work must commence and be completed as follows:

Commence: 14 August 2013

Complete: .06 September 2013

By submitting a bid, the Bidder certifies that they have sufficient material and human resources allocated or available and that the above work period is adequate to both complete the known work and absorb a reasonable amount of unscheduled work.

D6007T (2007-11-30)

8. Project Schedule

As part of its technical bid, the Bidder must propose its preliminary project schedule, in Gantt chart format. The project schedule must include the Bidder's work breakdown structure, the scheduling of main activities and milestone events, and any potential problem areas involved in completing the Work.

The Bidder's schedule must also provide a target date for each of the following significant events:

- a. Vessel Docking ;
- b. Vessel Undocking ;
- c. Sea Trials.

A0011T (2007-05-25)

9. Vessel Transfer Costs

9.1 The evaluation price must include the cost for transferring the vessel from its home port to the shipyard/ship repair facility where the Work will be performed and the cost of transferring the vessel to its home port following completion of the Work, in accordance with the following:

a) The Bidder must provide the location of the shipyard/ship repair facility where it proposes to perform the Work together with the applicable vessel transfer cost from the list provided under paragraph 2 of this clause:

Proposed shipyard/ship repair facility: _____

Applicable vessel transfer cost: _____ .

b) If the list in paragraph 2 of this clause does not provide the shipyard/ship repair location where the Bidder intends to perform the Work, then the Bidder must advise the Contracting Authority, in writing, at least Five (5) calendar days before the bid closing date, of its proposed location for performing the Work.

The Contracting Authority will confirm to the Bidder, in writing, at least Three (3) calendar days before the bid closing date, the location of the shipyard/ship repair and the applicable vessel transfer cost.

A bid that specifies a location for executing the Work which is not on the list of paragraph 2 of this clause, and for which a notification in writing has not been received by the Contracting Authority as required above, will be considered non-responsive.

9.2 List of shipyard/ship repair facilities and applicable vessel transfer costs

Vessel: CCGS Sigma T

Home port: Dartmouth, Nova Scotia

Transfer costs in the case of vessels transferred using a government delivery crew include the fuel cost at the vessel's most economical speed of transit and for unmanned refits only, crew transportation costs for the delivery crew based on the location of the vessel's home port and the shipyard/ship repair facility.

Crew transportation costs do not include any members of the delivery crew who remain at the shipyard/ship repair facility in order to discharge project responsibilities related to the vessel being transferred.

Transfer costs in the case of vessels transferred unmanned by either commercial towing, railway, highway or other suitable means of transportation must be:

- i) included as part of the Bidder's financial bid in the case where the Bidder is responsible for the transfer; or
- ii) identified as the applicable vessel transfer cost, as given in the list below, in the case when Canada is responsible for the transfer.

Company	City	Transfer Cost
AF Theriault	Methegan, NS	\$ 1,092.66
Shelburne Ship Repair	Shelburne, NS	\$730.90
LIFE	Lunenburg, NS	\$420.81
Abco	Lunenburg, NS	\$420.81
CME Marine	Sambro, NS	\$275.17
Aecon Fabco	Pictou, NS	\$1,233.60
Samson Boats	Arichat, NS	\$824.86

A2040T (2008-05-12)

10. Docking Facility Certification

Before contract award, the successful Bidder may be required to demonstrate to the satisfaction of Canada that the certified capacity of the docking facility, including any means or conveyance to remove the vessel from the water, is adequate for the anticipated loading in accordance with the related dry docking plans and other documents detailed in the Contract. The successful Bidder will be notified in writing and will be allowed a reasonable period of time to provide detailed keel block load distribution sketches and blocking stability considerations, along with the supporting calculations to show the adequacy of the proposed docking arrangement.

Before contract award and within Five (5) calendar days of written notification by the Contracting Authority, the successful Bidder must provide current and valid certification of the capacity and condition of the docking facility to be used for the Work. The certification must be provided by a recognized consultant or classification society and must have been issued within the past two years.

Although a dry docking facility may have a total capacity greater than the vessel to be docked, the weight distribution of the vessel may cause individual block loading to be exceeded. Also, while the physical dimensions of a dry docking facility may indicate acceptability for docking of a specific vessel, other limitations such as spacing of rails on a marine railway, concrete piers of abutments adjoining the dry dock may, preclude the facility from being considered as a possible dry docking site and render the bid non-responsive.

B9006T (2008-05-12)

11. Workers Compensation Certification- Letter of Good Standing

The Bidder must have an account in good standing with the applicable provincial or territorial Workers' Compensation Board.

The Bidder must provide, within Five (5) days following a request from the Contracting Authority, a certificate or letter from the applicable Workers' Compensation Board confirming the Bidder's good standing account. Failure to comply with the request may result in the bid being declared non-responsive.

A0285T (2007-05-25)

12. Welding Certification

Welding must be performed by a welder certified by the Canadian Welding Bureau and in accordance with the requirements of the following Canadian Standards Association (CSA) standards: CSA W47.1-03, Certification of Companies for Fusion Welding of Steel (Minimum Division Level 2.1); and CSA W47.2-M1987(R2003), Certification of Companies for Fusion Welding of Aluminum (Minimum Division Level 2.1).

Before contract award and within Five (5) calendar days of the written request by the Contracting Authority, the successful Bidder must submit evidence demonstrating its certification to the welding standards.

B4075T (2008-05-12)

13. SAAC Manual Clauses

A7035T (2007-05-25) List of Proposed Sub-contractors
A9125T (2007-05-25) Valid Labour Agreement

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Financial Bid (1 hard copy)

Section II: Certifications (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 should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and 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: Financial Bid

1.1 Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet in Annex "F". The total amount of Applicable Taxes must be shown separately, if applicable.

1.2 SACC Manual Clauses

C0414T (2008-05-12) Vessel Refit, Repair or Docking – Cost
C0417T (2008-05-12) Unscheduled Work and Evaluation Price

Section II: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

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

2. Basis of Selection

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

A0069T (2007-05-25)

3. Public Bid Opening

A public bid opening will be held in the offices of Public Works and Government Services at 1713 Bedford Row in Halifax, Nova Scotia at 2:00 PM ADT on 06 August 2013

A0017T (2007-05-25)

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and related documentation to be awarded a contract. Canada will declare a bid non-responsive if the required certifications and related documentation are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications, to provide the related documentation or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true

2. Additional Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

2.1 Supporting Certifications and Technical Deliverable Requirements

- a. **Project Schedule**
- b. **Docking Facility Certification**
- c. **Workers Compensation Certification- Letter of Good Standing**
- d. **Welding Certification**
- e. **List of Proposed Sub-contractors**
- f. **Valid Labour Agreement**

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

1. Security Requirement

There is no security requirement associated with the requirement.

2. Financial Capability

Manual SACC clause A9033T (2012-07-16) Financial Capability

3. Insurance Requirements

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.

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

G1007T (2011-05-16)

PART 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. carry out the maintenance and alterations of the Department of Fisheries and Oceans vessel CCGS Sigma T in accordance with the Requirement at Annex A
- b. carry out any approved unscheduled work not covered in the above paragraph (a).

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* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

2.1 General Conditions

2030 (2013-03-21), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

2.2 Supplemental General Conditions

1029 (2010-08-16) Ship Repairs, apply to and form part of the Contract.

3. Term of Contract

3.1 Work Period - Marine

Work must commence and be completed as follows:

Commence: 14 August 2013

Complete: 06 September 2013

The Contractor certifies that they have sufficient material and human resources allocated or available and that the above work period is adequate to both complete the known work and absorb a reasonable amount of unscheduled work.

D6007C (2007-11-30)

4. Authorities

4.1 Contracting Authority

The Contracting Authority for the Contract is:

Theresa Brow

Supply Specialist

Public Works and Government Services Canada

Acquisitions, Marine

1713 Bedford Row,

Halifax, Nova Scotia

Telephone: (902) 496-5166

Facsimile: (902) 496-5016

E-mail address: Theresa.Brow@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.

4.2 Project Authority

The Technical Authority for the Contract is:

Dan Chipman

Fisheries and Oceans / Canadian Coast Guard

Technical Management Services

Telephone: (902) 426-2142

Facsimile: (902) 426-2330

E-mail Address: Dan.Chipman@dfo-mpo.gc.ca

The Technical Authority named above 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

Solicitation No. - N° de l'invitation

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Buyer ID - Id de l'acheteur

ha1403

Client Ref. No. - N° de réf. du client

F5561-13-5236

File No. - N° du dossier

HAL-3-71080

CCC No./N° CCC - FMS No/ N° VME

Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

A1030C (2007-05-25)

5. Payment

5.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price as specified in Annex "B". Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

C0207C (2011-05-16)

5.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

SACC *Manual* clause H1000C (2008-05-12) Single Payment

6. Invoicing Instructions

The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed. Invoices are to be made out to:

Fisheries and Oceans
Marine Engineering
Maritime Regional Headquarters Building
50 Discovery Drive, level 4
Dartmouth, Nova Scotia
B2Y 4A2

Attention: Diane McNair

The original invoice is to be forwarded for verification to:

Public Works and Government Services Canada
Acquisitions, Marine
P.O. Box 2247, 1713 Bedford Row
Halifax, Nova Scotia
B3J 3C9

Attention: **Theresa Brow**

H5001C (2008-12-12)

7. Project Schedule

The Contractor must provide a detailed project schedule in Gantt chart format to the Contracting Authority and the Project Authority One (1) week after award of Contract. This schedule must highlight the specific dates for the events listed below and all items listed in the Pricing Data Sheet .

The Contractor's schedule must include target dates for each of the following significant events:

- a. Vessel Docking ;
- b. Vessel Undocking ;
- c. Sea Trials .

A0011C (2007-05-25)

8. 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's 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.

B9035C (2008-05-12)

9. Provision of Office Accommodation by the Contractor

For the period of the Contract, the Contractor must provide furnished office accommodation for authorized representatives of Canada as follows:

- a. provide high speed internet (wired or wireless)
- b. provide the temporary use of a black and white printer / scanner (USB)

The above office furnishings and accommodations are to be made available for one (1) representative of Canada only and may not be occupied at all times during the period of the Contract. During periods of inoccupancy the Contractor may make other uses of the office accommodations as required.

A9060C (2006-06-16)

10. Welding Certification

The Contractor must ensure that welding is performed by a welder certified by the Canadian Welding Bureau (CWB) in accordance with the requirements of the following Canadian Standards Association (CSA) standards:

- a. CSA W47.1-03, Certification for Companies for Fusion Welding of Steel, minimum division level 2.1; and
- b. CSA W47.2-M1987 (R2003), Certification for Companies for Fusion Welding of Aluminum, minimum division level 2.1.

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 he intends to use in the performance 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.

B4075C (2008-05-12)

11. Inspection and Acceptance

The Technical Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

D5328C (2007-11-30)

12. Outstanding Work and Acceptance

The Inspection Authority, in conjunction with the Contractor, will prepare a list of outstanding work items at the end of the 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 Inspection Authority on the work completion date to review and sign off the form PWGSC-TPSGC 1205, Acceptance. 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 that work is completed.

The Contractor must complete the above form in three (3) copies, which will be distributed by the Inspection Authority as follows:

- a. original to the Contracting Authority;
- b. one copy to the Technical Authority;
- c. one copy to the Contractor.

D5801C (2008-05-12)

13. Vessel Warranty – Refit and Repair

The warranty clause of the general conditions forming part of the Contract is deleted and replaced by the following:

"08 Warranty"

The Contractor, if requested by Canada, must replace or repair at its own expense any finished work, excluding Government Issue incorporated in the Work, which becomes defective or which fails to conform to contract requirements as a result of faulty or inefficient manufacture, material or workmanship.

Despite acceptance of the finished work, and without restricting any other term of the Contract or any condition, warranty or provision imposed by law, the Contractor warrants that the following will be free from all defects and will conform with the requirements of the Contract:

The painting of the underwater portion of the hull for a period of 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 365 days and multiplied by the number of days remaining in the warranty period. The resultant sum would represent the "Dollar Credit" due to Canada from the Contractor.

All other painting work for a period of 365 days commencing from the date of acceptance of the Work;

All other items of work for a period of ninety (90) days commencing from the date of acceptance of the Work, except that:

the warranty on the work related to any system or equipment not immediately placed in continuous use or service will be for a period of ninety (90) days from the date of acceptance of the vessel;

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.

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.

Refer to Annex "D " for Warranty Defect Claim Procedures and forms.

K0027C (2010-08-16)

14. Warranty – Contractor responsible for all costs

Section 22 entitled Warranty of general conditions 2030 is amended by deleting subsections 3 and 4 in its entirety and replacing it with the following:

The Work or any part of the Work found to be defective or non-conforming will be returned to the Contractor's plant for replacement, repair or making good. However, when in the opinion of Canada it is not expedient to remove the Work from its location, the Contractor must carry out any necessary repair or making good of the Work at that location. In such cases, the Contractor will be responsible for all Costs (including travel and living expenses) incurred in so doing, Canada will not reimburse these Costs.

The Contractor must pay the transportation cost associated with returning the Work or any part of the Work to the Contractor's plant pursuant to subsection 3. The Contractor must also pay the transportation cost associated with forwarding the replacement or returning the Work or part of the Work when rectified to the delivery point specified in the Contract or to another location directed by Canada.

All other provisions of the warranty section remain in effect.

K0030C (2012-07-16)

15. SAAC Manual Clauses

A0285C (2007-05-25) Workers Compensation

A9047C (2008-05-12) Title to Property – Vessel

A9006C (2012-07-16) Defence Contract

B5007C (2010-01-11) Procedures for Design Change or Additional Work

B9014C (2008-05-12)	Outstanding Work and Acceptance – Civilian
B9035C (2008-05-12)	Progress Meetings
A0032C (2011-05-06)	Vessel Manned Refits
A0290C (2008-05-12)	Hazardous Waste – Vessels
A9055C (2010-08-16)	Scrap and Waste Material
A9066C (2008-05-12)	Vessel – Access by Canada

16. Certifications

16.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation or if 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.

17. Applicable Laws

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

18. Priority of Documents

If there is a discrepancy between the wording 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 (2010-08-16);
- (c) the general conditions 2030 (2013-06-27);
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex F, Financial Bid Presentation Sheet;
- (g) Annex C, Insurance Requirements;
- (h) the Contractor's bid dated _____.

19. 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 does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding 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 is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

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G1001C (2008-05-12)

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ANNEX "A" - STATEMENT OF WORK

The entire Statement of Work is a separate electronic document entitled:

Refit Specification - CCGS Sigma T, Specification No. 13-S-59-011-1 July 9, 2013

ANNEX B - BASIS OF PAYMENT

Remark to Bidder: Annex B will form the Basis of Payment for the resulting contract and should not be filled in at the bid submission stage. Refer to Annex F "Financial Bid Presentation Sheet".

1. Contract Price

a)	Known Work For work as stated in Part 1, Specified in Annex "A" for a FIRM PRICE of:	\$ _____
d)	Taxes Estimated at (__%) of Line a) only	\$ _____
e)	Total Firm Price Taxes Included: For a FIRM PRICE of :	\$ _____

2. Unscheduled Work**2.1 Price Breakdown:**

The Contractor must, upon request, provide a price breakdown for all unscheduled work, by specific activities with trades, person-hours, material, subcontracts and services.

2.2 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.

2.3 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 10% 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.

C0902C (2008-12-12)

3 Overtime

No overtime work will 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 by taking the

average hourly direct labour rate premiums, plus certified fringe benefit additives, plus profit of 7 1/2 percent on labour premium and fringe benefits. These rates will remain firm for the duration of the Contract including all amendments and are subject to audit if deemed necessary by Canada.

4 Daily Services Fee

In the event of a delay in the performance of the Work that lengthens the Work Period beyond the date specified in this Contract, and if such delay is recognized and agreed upon by the Contracting Authority as being attributable to Canada, Canada agrees to pay the Contractor the daily services fee, described below, for each day of such delay. This fee shall be the sole liability of Canada to the Contractor for the delay.

The firm daily services fee is:

- | | | |
|-----|---------------------------------------|----------|
| (a) | For a working day on the drydock | \$ _____ |
| (b) | For a non-working day on the drydock: | \$ _____ |
| (c) | For a working day at the berth: | \$ _____ |
| (d) | For a non-working day at the berth: | \$ _____ |

The above fees shall include but not be limited to, all aspects of the following costs: Administrative Support, Production Services, Quality Assurance, Material Support, Planned Maintenance and Ship Services, and all other resources and direct costs needed to maintain the Vessel at the Contractor's facility. These fees are firm and not subject to any additional charges for markup or profit.

ANNEX C - INSURANCE REQUIREMENTS

C1 Ship Repairers' Liability Insurance

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.

The Ship Repairer's Liability insurance must include the following:

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.

Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by the Department of Fisheries and Oceans and Public Works and Government Services Canada for any and all loss of or damage to the vessel, however caused.

Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.

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.

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.

G5001C (2008-05-12)

C2 Commercial General Liability Insurance

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 \$2,000,000 per accident or occurrence and in the annual aggregate.

The Commercial General Liability policy must include the following:

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.

Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.

Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.

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.

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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.

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.

Employees and, if applicable, Volunteers must be included as Additional Insured.

Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)

Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.

Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.

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

G2001C (2008-05-12)

C3 Limitation of Contractor's Liability for Damages to Canada

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.

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 \$10,000,000.00 . This limitation of the Contractor's liability does not apply to:

any infringement of intellectual property rights; or

any breach of warranty obligations.

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.

N0001C (2008-05-12)

ANNEX D– WARRANTY DEFECT CLAIM PROCEDURES AND FORMS

Warranty Procedures

1. Scope

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

2. Definition

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.”

3. Warranty Conditions

a. 2030 General Conditions - 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 acceptance for the specified areas of 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.

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.

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 attached 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.

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.

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.

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APPENDIX 1 to ANNEX D**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 – Critique <input type="checkbox"/> Degraded – Dégradé <input type="checkbox"/> Operational - Opérationnel <input type="checkbox"/> Non-Operational - Non-opérationnel <input type="checkbox"/>	
1. Description of Complaint – Description de plainte		
Contact Information – information de contact Name – Nom _____ Tel. No. - N° Tél _____ Signature – Signature _____ Date _____		
2. Contractor's Investigative Report – Le rapport investigateur de l'entrepreneur		
3. Contractor's Corrective Action – La Modalité de reprise de l'entrepreneur		
Contractor's Name and Signature - Nom et signature de l'entrepreneur _____		Date of Corrective Action - Date de modalité de reprise _____
Client Name and Signature – Nom et signature de client _____		Date _____

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

Signature – Signature

Date

5. Additional Information – Renseignements supplémentaires

ANNEX F - FINANCIAL BID PRESENTATION SHEET

Proposed Work Period Location: _____

1. Evaluation of Price

a)	Known Work For work as stated in Part 1, specified in Annex "A" and detailed in the attached Pricing Data Sheet for a FIRM PRICE of:	\$ _____
b)	Unscheduled Work Estimated labour hours at a firm Charge-out Labour Rate, including overhead and profit: 60 person hours X \$ _____ per hour for a PRICE of:	\$ _____
c)	Daily Services Fees i) Five (5) working days on drydock X \$ _____ = \$ _____ ii) two (2) non-working days on drydock X \$ _____ = \$ _____ iii) one (1) working day at berth X \$ _____ = \$ _____ (iv) one (1) non-working day at berth X \$ _____ = \$ _____	\$ _____
d)	Vessel Transfer Cost As stated in Part 2.	\$ _____
e)	EVALUATION PRICE Taxes Excluded, [a + b + c + d]: For an EVALUATION PRICE of :	\$ _____

2. Unscheduled Work

2.1 Price Breakdown:

The Contractor must, upon request, provide a price breakdown for all unscheduled work, by specific activities with trades, person-hours, material, subcontracts and services.

2.2 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.

2.3 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 _____ 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.

C0902C (2008-12-12)

3. Overtime

No overtime work will 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 by taking the average hourly direct labour rate premiums, plus certified fringe benefit additives, plus profit of 7 1/2 percent on labour premium and fringe benefits. These rates will remain firm for the duration of the Contract including all amendments and are subject to audit if deemed necessary by Canada.

4. Daily Services Fee

In the event of a delay in the performance of the Work that lengthens the Work Period beyond the date specified in this Contract, and if such delay is recognized and agreed upon by the Contracting Authority as being attributable to Canada, Canada agrees to pay the Contractor the daily services fee, described below, for each day of such delay. This fee shall be the sole liability of Canada to the Contractor for the delay.

The firm daily services fee is:

- | | | |
|-----|---------------------------------------|----------|
| (a) | For a working day on the drydock | \$ _____ |
| (b) | For a non-working day on the drydock: | \$ _____ |
| (c) | For a working day at the berth: | \$ _____ |
| (d) | For a non-working day at the berth: | \$ _____ |

The above fees shall include but not be limited to, all aspects of the following costs: Administrative Support, Production Services, Quality Assurance, Material Support, Planned Maintenance and Ship Services, and all other resources and direct costs needed to maintain the Vessel at the Contractor's facility. These fees are firm and not subject to any additional charges for mark-up or profit.

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APPENDIX 1 TO ANNEX "F"

PRICING DATA SHEET

The Pricing Data sheet will be provided with the minutes of the bidders conference as a Solicitation Amendment and will be titled **Pricing Data Sheet**.



Fisheries and Oceans
Canada

Canadian Coast Guard

Pêches et Océans
Canada

Garde côtière canadienne

CANADIAN COAST GUARD



REFIT SPECIFICATION

CCGS SIGMA-T

SPECIFICATION NO. 13-S059-011-1

July 9, 2013

DARTMOUTH, NOVA SCOTIA



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GENERAL NOTES

1. **On-Site Project Officer:** All the specified work, as well as all work arisings, shall be completed to the satisfaction of On-site Project Officer who, unless otherwise advised, will be the Supervisor Marine Engineering (also known as the Vessel Representative), or his designated representative. Upon completion of each item of the specification, the Supervisor Marine Engineering shall be notified so that he/she may inspect the work prior to the complete closing up of any work. Failure to give notification does not absolve Contractor of the responsibility of providing Supervisor Marine Engineering the opportunity to inspect any item. Inspection of any item by the Supervisor Marine Engineering does not substitute for any required inspection by Transport Canada Marine Safety Branch (TCMSB), Public Works and Government Services Canada (PWGSC) or Health Canada (HC).
2. **Safety:** There is a safety Annex "A" attached to this specification entitled "Requirements and Expectations for Contractors". In addition to the detailed requirements within the specification, this annex makes reference to excerpts from the document DFO/5737, "FLEET SAFETY AND SECURITY MANUAL" that are applicable to contracted refit and dry-docking situations. If Contractors do not already have copies of this reference document, they will be made available upon request.

It is noted in the annex, that all contracted work shall be conducted in compliance with the requirements of the Canada Labour Code, Part 2. Potential Contractors shall include with their bids the name of their Safety Manager or Supervisor who will ensure that these requirements for workplace safety are met.

3. **Sub-Contractors:** All conditions, stipulations etc. listed in the General Notes apply to any Sub-Contractors employed by the Main Contractor to carry out work on any Specification Item.
4. **Schedule:** At the Pre-Refit Meeting, the successful Contractor shall provide a Production Bar Chart or Schedule showing commencement and completion dates for each item in this specification. This document shall highlight any critical dates and be capable of showing the effects of late completion date of the work package. Contractor shall provide updated Production Schedules to the Supervisor Marine Engineering and PWGSC Inspector whenever the schedule is revised.
5. **Daily Service Fee:** Contractor shall allow sufficient time to complete all the 'known' work described in this specification. Contractors shall bid the total price of their estimated daily service fees, plus a unit price for adjustment purposes. The Contractor shall provide sufficient personnel, materiel, and equipment resources to complete the specified work, including the allowance for arising, within the period of the contract. Extra effort required due to the Contractor's failure to maintain his production schedule will not be paid for by CCG.

GENERAL NOTES (CONT.)

6. **Chemist's Certificates:** Contractor shall supply Supervisor Marine Engineering with Marine Chemist's Certificates in accordance with TCMSB TP 3177E before any cleaning, painting or hot work is commenced in confined spaces or machinery compartments. Certificates shall clearly state the type of work permitted, duration of certificate and the following air test information: toxic gas level in PPM, % LEL (percentage lower explosive limit) and % O₂ (percentage oxygen). Each certificate must be signed and dated by the marine chemist or qualified person carrying out the test. All certificates shall be renewed as required by the regulations. Contractor and his sub-Contractors are advised that any work carried out in confined spaces as defined by the Canada Labour Code (CLC) and relevant provincial legislation must fully comply with all provisions therein.

Contractor and his sub-contractors are advised that any work carried out in confined and / or enclosed spaces as defined by the Canadian Labour Code Part II (CLC), the Marine Occupational Health & Safety Regulations (MOSH) and the relevant provincial legislation shall be fully complied with.

<http://www.tc.gc.ca/media/documents/marinesafety/tp3177e.pdf>
Canadian Labour Code <http://laws-lois.justice.gc.ca/PDF/L-2.pdf>
MOSH <http://laws-lois.justice.gc.ca/PDF/SOR-87-183.pdf>

7. **Welding:** Contractor shall be currently certified by the Canadian Welding Bureau in accordance with Standard W47.1-1983 "Certification of Companies for Fusion Welding of Steel Structures," Division 1, 2.1 or 2.2. Where welding is required on aluminium superstructure CCG specification for ALUMINIUM WELDING (TP 9415E) will apply and Contractor shall be qualified to CWB 47.2 for aluminium welding. All personnel performing welding shall be approved by the Canadian Welding Bureau. All sub-contractors shall be currently certified by CWB as above + Division 3. When a sub-contractor is certified to Division 3, then the primary Contractor shall have a certified Quality Assurance Program in place that introduces and maintains proper control of the sub-contractor's performance. Any welding near bearings or electronic equipment shall have its work locally grounded. No welding shall be undertaken on the vessel without the direct permission of the Chief Engineer.
8. **Electrical:** All electrical installations or renewals shall be in accordance with the latest editions of the following Marine electrical standards:

TP 127E - Ship Safety Electrical Standards
<http://www.tc.gc.ca/Publications/en/TP127/PDF/HR/TP127E.pdf>

IEEE Standard 45 - Recommended Practice for Electrical Installation on Shipboard. <http://standards.ieee.org/announcements/45rev.html>

GENERAL NOTES (CONT.)

9. **Hot work Ventilation and Containment:** During all known work and work arising that involve hot work, Contractor shall ensure that all dust, debris, gas and smoke generated by the work is evacuated from the vessel by the most direct method.

Each item that involves hot work shall have a defined zone which shall be kept sealed off from the rest of the vessel during the complete work period that involves the generation of welding gases, smoke, and grinding dust etc. These zones shall be indicated in the items contained within the known work package. All extra work arising that involve hot work shall have a zone determined using the same logic. The zone shall be limited to the space(s) where the hot work is being done, boundary areas where fire watches are required, and the access routes between the zone and the exterior of the vessel for workers, welding and cutting equipment and ventilation ductwork.

In areas where occupied accommodations and or workplaces cannot be completely isolated from personal access a double sealed door (air lock) arrangement shall be erected to minimize ingress of the contaminants into occupied areas. A ventilation extraction point shall be located as near as practical to the inside door on the worksite side to reduce the egress into the air lock and subsequently the accommodations and/or workspaces.

All doorways within the affected area that are not being worked or require access for fire watch activities shall be sealed off to prevent all containments from getting in. Passageway branches that connect to the zone shall be sealed off. Contractor shall completely clean all surfaces and fabrics within a compartment that are not suitably protected.

10. **Protection:** Contractor shall provide adequate temporary protection for any equipment or areas affected by his work. Contractor shall take proper precautions to maintain in a proper state of preservation any machinery, equipment, fittings, stores or items of outfit (furnishings, linings, deck coverings, etc.) which might become damaged by exposure, movement of materials, paint, sand, grit or shot blasting, airborne particles from sand, grit or shot blasting, welding, grinding, burning, gouging and painting. Any damage shall be the responsibility of the Contractor to repair or renew.
11. **Auxiliary Services:** Contractor shall include in quotation the costs of any and all transportation, rigging, staging, slinging, crane, removals, and installations of parts and equipment such as may be required to carry out work.

GENERAL NOTES (CONT.)

12. **Enclosures and Heating:** Contractor shall provide all enclosures and heating required to carry out all the scheduled work, taking into account the nature of the work, the time of year the refit is, and the weather conditions for that time of year in Contractor's geographic area. Examples of where heating and enclosures could be required include but are not limited to painting, shaft withdrawal, and tank cleaning.
13. **Service Conditions:** Unless specified otherwise, all components, materials and installations supplied by or carried out by the Contractor shall be adequate to meet the following service conditions:

In areas that are exposed to the elements:

- outside air temperature of minus (-) 40°C to plus (+) 35°C;
- wind velocity of 50 knots;
- water temperature of minus (-) 20°C to plus (+) 30°C;
- shock loading of 2.5g horizontal, 1.5g vertical.

All new components, materials and installations within the ship shall be adequate to withstand the specified shock loading accelerations.

14. **Hot work & Fire Watches:** Any item of work involving the use of heat in its execution requires that the Contractor advises the Supervisor Marine Engineering prior to starting such heating and upon its completion. Contractor shall provide sufficient suitable fire extinguishers and a fire watch during any such heating and until the work has cooled. The fire watch shall be arranged such that all sides of surfaces being worked on are visible and accessible. Ship's extinguishers are not to be used except in an emergency. Should the Contractor have to use ship's extinguishers in an emergency they are to be recharged and re-certified by a local facility, of CCG's choice, at Contractor's cost. Contractor shall provide suitable fire retardant coverings to protect wire ways, cables, equipment and structure from welding slag, splatter etc.
15. **Relocations:** Any piping, manholes, parts and/or equipment requiring temporary relocation to carry out specified work, or to gain access, shall be refitted upon completion with new jointing, anti-seize compound, clamps and brackets as applicable (Contractor supply - CFM). All equipment and systems, so disturbed, shall be tested to prove correct function and fluid integrity upon completion. Defects shall be corrected at Contractor's cost. Note: It shall be Contractor's responsibility to identify, to the Supervisor Marine Engineering, equipment and systems that are to be tested to verify correct function, prior to being disturbed for required work.

GENERAL NOTES (CONT.)

16. **Lighting:** Temporary lighting and/or temporary ventilation required by Contractor to carry out any item of this specification shall be supplied, installed and maintained in safe working condition by the Contractor and removed on completion of the related work. Naked light bulbs or tubes shall not to be used as temporary lighting inside the vessel. All lights used in the vessel shall be supplied with approved guards.
17. **Cleanup:** Contractor shall ensure that all spaces, compartments, and areas where work has been carried out, or Shipyard staff and Sub-Contractors has used for transit routes, are left in "as clean a condition as found" when the vessel commenced refit. This includes both internal and external areas of work, as well as any affected adjacent spaces outside the principle areas of work. All rags, debris, and associated garbage generated by the shipyard staff and Sub-Contractors while on board shall be removed to the garbage container(s) each day. Costs associated with the removal of dirt, debris, and garbage shall be included in the Contractor's quote.
18. **Inspection:** Contractor shall be responsible for calling in the services of TCMSB, PWGSC and HC Inspectors when and as required for survey and inspection items. All TCMSB surveyors called in by the Contractor shall be asked to sign-off the Chief Engineer's Inspection Log Book for all items surveyed. Where the approval of Environment Canada (EC) or any other authority is required by law or by work contained in this specification, Contractor shall be responsible for obtaining and keeping a record of these approvals. Three (3) copies of all approvals and records shall be given to the PWGSC inspector.
19. **Painting:** Unless specified otherwise, replacement and/or disturbed steelwork shall be given a minimum of two (2) coats of marine primer immediately upon completion of work. Contractor shall inform the Vessel Representative of the area to be primed so the Vessel Representative can advise the Contractor of the suitable primer to be used. Lead-based paints shall not be used. Prior to painting, all new and disturbed steelwork shall be power tool cleaned as a minimum standard of surface preparation. The Contractor shall arrange for the PWGSC Inspector to be notified after the first coat of paint is fully cured so that it may be inspected prior to the application of the second coat. Failure to do so shall result in another coat being applied at the Contractor's expense.

GENERAL NOTES (CONT.)

20. **Materials & Tools:** All materials, unless otherwise specified, shall be supplied by the Contractor. Contractor to supply all necessary tools and equipment to perform the specified work. Special ship-specific tools, as required, will be issued by and returned to the Supervisor Marine Engineering. Contractor shall be responsible for removing the tools from their stored location aboard the vessel, and returning them and securing them in place when finished. Otherwise, ship's tools and equipment will not be available for Contractor's use.
21. **Reference Material:** Vessel Representative may have provided information in this specification and attachments (engineering drawings, pictures, etc.) as guidance information only. All drawings, pictures, dimensions, descriptions, locations, measurements, engineering values, materials, etc. listed or implied shall be verified by Contractor, prior to any work or fabrication commencing. All discrepancies shall be recorded and reported to the Supervisor Marine Engineering and PWGSC Inspector as soon as possible. Any changes to the specified work, due to the above, shall be resolved between Contractor and Supervisor Marine Engineering prior to work starting.

The overhaul and installation of all machinery and equipment specified herein shall be as per the manufacturers' applicable instructions, drawings and specifications.

22. **Measurements:** All dimensional measurements shall be taken and recorded in inches. Unless otherwise specified, the dimensions shall be taken and reported in thousandths of an inch (0.000"). All measuring devices shall be described on the submitted reporting sheets. All reported dimensions shall be either typed or printed in a neat legible manner, and shall include the name of the person who took the readings. Contractor shall be responsible to ensure all testing and measurement equipment (mechanical or electronic) required to complete the specified work is calibrated and that calibration certificates for said devices shall be submitted to PWGSC inspector prior to final inspection or witnessing of tests.

All tests results, calibrations, measurements, trials and readings shall be properly tabulated, compiled and three (3) typewritten copies shall be provided; two copies to CCG Technical Services and one copy to the PWSC inspector. All test and trials shall be performed to the satisfaction of the Vessel Representative and TCMSB inspector.

GENERAL NOTES (CONT.)

23. **Co-operation:** During the period that the ship is in refit, members of the ship's complement, Coast Guard technical staff, and service specialists may be carrying out repairs to, maintenance of, or modifications of various ships' equipment not covered in this specification. The Contractor shall not deny access to the vessel to these persons. Every effort will be taken to ensure that this Coast Guard controlled work will not interfere or conflict with that being carried out by the Contractor.
24. **Fire Safety Systems:** Whenever any work is being carried out involving the ship's fire fighting or fire detecting system, it shall be done in such a way as to leave the vessel and all persons aboard with adequate protection against fire at all times. This may be accomplished by removal or disarming of only a Portion of the system at a time, by replacement with spares while work is in progress, or by other reasonable means acceptable to Supervisor Marine Engineering.
- Note: Contractor shall notify Supervisor Marine Engineering prior to deactivation and upon reactivation of fire fighting and/or fire detecting systems.
25. **Smoking:** The Public Service Smoking Policy forbids smoking in Government ships in all areas inside the ship where shipyard personnel will be working. Contractor shall inform workers of this policy and ensure that it is complied with.
26. **Access:** The following areas are out of bounds to Contractor's personnel except to perform work as required by the specifications: all cabins, offices, workshops, Wheelhouse, Control Room, public washrooms, Officers' and Crew's Messes and Lounges. Contractors shall ensure that no workers bring meals onboard the ship.
27. **Dockside Cleanup:** Contractor shall be responsible for the clean-up of adjacent dock areas used by his personnel and/or equipment during the contracted work. Clean-up shall include, but not be limited to, the following:
- a) Removal of all dirt, grit and debris;
 - b) Removal of all staging, containers and equipment;
 - c) Immediate cleanup and legal disposal of any leaked oils, solvents or other hazardous liquids.
28. **Construction Standard:** This vessel falls under the TCMSB's Blue Decal Program and as such all work pertaining to the vessel construction must meet TCMSB regulation TP 1332 – Construction Standard for Small Vessel.

<http://www.tc.gc.ca/Publications/en/TP1332/PDF/HR/TP1332E.pdf>
<http://www.tc.gc.ca/eng/marinesafety/debs-small-vessels-menu-2258.htm>

GENERAL NOTES (CONT.)

Additional Information

1. The CCGS SIGMA-T is a 40' Coast Guard vessel used mainly for Science Research.

2. Vessel particulars are as follows:

Vessel Location	Dartmouth, Nova Scotia
Year Built	2008
Yard	Samson Enterprises Ltd.
Length Overall	12.11 Metres
Breadth Molded	4.66 Metres
Draft	1.07 Metres
Engine	D9-425/500 Volvo Penta
Gearbox	MG-5075SC Twin Disc

3. New or disturbed joints (i.e. flanged) shall be secured using new stainless steel (SS) bolts and new stainless steel locking nuts. All stainless steel flanges to be bonded through their bolting arrangement. Dissimilar metal flanges, piping, fasteners or valves shall be fully isolated from each other using a non conducting gasket material. When adding a dissimilar metal attachment between two similar metal flanges/piping, a bonding strip shall be attached between the two similar metals (do not bond to dissimilar metal). Bonding straps shall be made from the similar metal to which they are bonding to.

4. Contractor shall take note that items in this specification are not detailed (i.e. piping, electrical, metal work, etc.) and require viewing in order to bid. Although not mandatory it is strongly recommended that the Contractor arrange a site visit to exam the CCGS SIGMA-T located at the Bedford Institute of Oceanography, Dartmouth Nova Scotia prior to submitting a bid. Bidders who do not view the vessel in order to determine the scope of work will be evaluated as if they had attended the site visit and are fully aware of the vessels existing condition prior to the refit.

5. Contractor shall perform all specified work in accordance with and meet the requirements of the latest version of the Transport Canada's Small Vessel Construction standards TP1332.

6. Contractor shall contact the Canadian Coast Guard Integrated Technical Services Supervisor Marine Engineering, Dannie Chipman at (902) 426-2142 or the Small Fleet Coordinator Steve Christian at (902) 426-6887, prior to any site visit. They will arrange and confirm vessel location and time of viewing.

HD-01 SERVICES

Contractor is responsible for additional connections required when moving the vessel between dry-dock and alongside berth at their premises. Services are required for the full refit/dry-dock period. Each item to be priced separately.

The Contractor shall quote a global price and daily rates for all services supplied to the vessel during the dry-docking period for adjustment purposes.

1. Electrical Power

- 1.1 Vessel shore power is a one (1): 30 amp, 120 VAC, 60 hz connection.
- 1.2 A ground cable shall be attached to the vessel's hull and the Contractor shall ensure compliance as per the Transport Canada Marine Safety Bulletin – “Grounding Safety in Drydock”.
<http://www.tc.gc.ca/eng/marinesafety/bulletins-1989-06-eng.htm>
- 1.3 Contractor shall not use the vessel's power supply ie; Inverters, converters, generator.

2. Gangways

- 2.1 Contractor shall supply and erect a gangway, complete with safety nets and guard rails as per Provincial regulations. Gangway to land on main deck aft and shall be illuminated during the dark hours when work is being conducted alongside. Similar arrangements to be made when vessel is removed from the water, in drydock.

Reference web site;

<http://www.gov.ns.ca/lwd/healthandsafety/docs/FishSafe.pdf>

- 2.2 Any movement of the gangway for the convenience of the Contractor shall be at the expense of the Contractor.

HD-01 SERVICES (CONT.)

3. Garbage Removal

- 3.1 All garbage containers (vessel's waste baskets or Contractor supplied containers) shall be emptied out on a daily basis. Contractor shall remove own daily garbage from work areas of the vessel. Cost shall be included in quote.
- 3.2 Contractor to ensure all spaces, compartments and areas of the vessel, external and internal, are left in as clean a condition as found. Removing dirt, debris, and associated materials to be included in their bid.

4. Berthing

- 4.1 Berthing and mooring facilities shall be provided in accordance to the Fleet Safety and Security Manual.
- 4.2 During refit, while not dry-docked; vessel shall be berthed at Contractor's wharf. There shall be sufficient water beneath the vessel that it shall not touch bottom at any time (upright and afloat).
- 4.3 Shipyard is responsible for all movements of the vessel during the refit period; including arrangements and costs of linehandlers, tugs, pilots, initial tying up, any movement of the vessel during refit and letting go of lines from Contractor's wharf on vessel departure from yard upon completion of refit.

5. Shelter / Enclosure

- 5.1 The Contractor shall provide a protective shelter (enclosed heated building preferred during fall and winter) around the vessel prior to any work commencing during inclement weather, the shelter shall remain for the entire refit period. The shelter shall be heated during fall and winter seasons and encloses all external work areas around the entire vessel including the superstructure and mast.
- 5.2 The shelter will provide full protection while work is performed during inclement weather. The shelter will also prevent unwanted debris, particles and/or materials (i.e. grinding debris, sponge blast, paint chips, etc) from leaving the immediate work area and provide the Contractor with the ability to recover the above and dispose of them in an approved manner.

HD-01 SERVICES (CONT.)

6. Sea Trial

- 6.1 Bidders shall include a "1-hour" sea trial in their bid price. The vessel will be operated by CCG personell under the Contractor's direction. The aim of the sea trial shall be to prove the safe and correct function of all systems and equipment that have been worked on, added or disturbed as part of the refit.

7. Quality Control

- 7.1 Contractor shall have a proven quality assurance program in place or is presently working on a system that may meet CSA series of Quality assurance program standards. This requirement will provide the Vessel Representative and PWGSC inspector with a concise record of all pertinent information requested during the vessel refit.
- 7.2 Contractor shall provide a typewritten report of all test, trials, calibrations, measurements, etc. taken, whether identified or implied in this specification. Contractor shall compile the individual readings for each specification item into a report with copies of the workers original notes and provide a copy to the Vessel Representative and the PWGSC inspector upon completion of the refit.
- 7.3 The final report is not meant to be a formal document, but rather a concise record of all reading taken. If the specification item does not require any readings then a simple note saying so will suffice.

HD-02 DOCKING / UNDOCKING

1. Contractor shall dock the vessel and allow sufficient service days to perform both the work described in this specification as well as a margin of time to cover work arising. Contractor shall quote a unit cost per service day. Contractor shall prepare blocks and necessary shoring to maintain true alignment of the vessel's hull and machinery throughout the dry-docking period. Upon completion of all specified work the Contractor shall undock the vessel.
2. The Contractor is responsible for ensuring all loaned drawings are returned, in their original condition, upon completion of work.
3. Vessel Particulars:

Length O.A.	12.11 Metres
Breadth Molded	4.66 Metres
Draft	1.07 Metres
Displacement	10283 Kg on LWL of 11.39 Meters
Height	6.0 Metres from Keel to highest fixed point
Electrical System	24 VDC, 12 VDC sub system 120 VAC Shore Power Connection
4. The vessel shall be docked so that all docking plugs, transducers, anodes, grounding plate and sea inlet grids are clear and accessible. Contractor shall ensure adequate clearance below the keel for performing work specified and shall advise in their bid, the minimum clearance expected. If any hull fittings are covered, the Contractor is responsible for all labour and materials required for making alternative arrangements for draining tanks, removal of docking plugs, blasting/painting of hull and/or moving blocks to gain access to areas of specified work.
5. The Contractor is responsible for the transfer of the vessel from its pre-docking berth or location onto its docking blocks. Likewise, Contractor is responsible for safe transfer of the vessel from blocks to berth upon re-floating of the vessel. Vessel's crew will not be available to assist with these operations nor will ships machinery. While at berth there shall be sufficient water beneath the vessel that it shall not touch bottom at any time (upright and afloat).

HD-02 DOCKING / UNDOCKING (CONT.)

6. Within four (4) hours of docking, cleaning of the under water hull by high pressure fresh water washing shall commence. Following cleaning, a preliminary visual inspection shall be undertaken in the presence of the Vessel Representative. Prior to commencing hydro blasting, all hull mounted equipment and openings (excluding seabays) are to be fully protected. The Contractor shall adhere to the Fisheries Protection Act with reference to reclaiming water used to clean the hull.
7. The Contractor shall give the Vessel Representative a minimum of four (4) hours notice before adding/removing liquids from any vessel tanks. Similarly, the Vessel Representative will advise the Contractor of any intended onboard fluid transfers.
8. Upon completion of all specified work and a minimum of 24 hours notice to the Vessel Representative, the vessel shall be re-floated.
9. Any contamination of the vessel's hull by materials, fluids and debris present on the dock shall be cleaned after the vessel is re-floated and clear of the dock. Cost shall be at the Contractor's expense and to the satisfaction of the Vessel Representative.

HD-03 PAINTING

SIGMA-T Vessel Square Areas

Wetted hull	~ 45 m ²
Above water line to deck	~ 40 m ²
Wheel house	~ 30 m ²
Main deck	~ 35 m ²

Contractor shall prepare and apply the coating system in accordance with the manufacturer's documentation and recommendations. As part of the Contractor's Q & A process, the following information shall be recorded for all painted areas:

- Provide a list of batch numbers with correspondent dates of manufacture.
- Record the quantity and type of any solvent added.
- Measure and record the ambient conditions.
- Record details of spray tips and pressures.
- WFT gauge readings to be taken on a regular basis during application.
- Using a calibrated DFT gauge, fifteen (15) measurements per 100 square ft. are to be taken and recorded. Upon agreement of consistency with the Vessel Representative, fifteen (15) measurements per 1000 square ft. are to be taken and recorded.
- All recorded information is to be typewritten and three (3) copies are to be given to the Vessel Representative.

HULL ABOVE WATER LINE

1. The hull above the water line to the gunwale shall be cleaned of loose scale, salt, grease, scuff marks, etc. All debris recovered and disposed of in an approved manner (i.e. Provincial / Federal Regulations/Acts). Copies of invoices detailing disposal shall be provided to the Vessel Representative.
2. Contractor shall quote on repairing, prepping and painting 1 m² of failed coating and provide a unit cost/m² for repair. Refer to section ED-07, item 6, repair to through hull hole. Contractor shall clean and prepare the affected areas for re-coating. These areas will here in after be referred to as "bare areas". The price will be adjusted depending on the actual amount of repairs completed. Spent or flaked coating to be removed with no undue or excessive damage to the underlying coating.
3. Contractor to remove old Coast Guard word marks, clean immediate areas, prep and install new owner supplied decals upon completion of coating system after the entire area has dried to touch.

HD-03 PAINTING (CONT.)

4. The damaged surface shall be cleaned, filled and prepared for coating, after proper preparation as identified by the paint manufacturer's recommendations work shall be witnessed by the Vessel's representative and approved by the PWGSC inspector.
5. Upon completion of repairs and final preparation, the entire above waterline to the top of the gunwale shall be coated with Gelcoat (red) - Ashland code 60012. Contractor shall apply Gelcoat coating as per the manufacturer's recommendation and adhere to the number of coats required to achieve full coverage. Contractor shall apply white Gelcoat to side stripe areas on the port and starboard sides after final preparation, area shall be similar to original size and orientation. Contractor shall apply black Gelcoat to side stripe areas on port and starboard sides after final preparation, area shall be similar to original size and orientation.

Contractor shall supply all coatings;

Top coat	- Gelcoat (White) - Hull side stripe
	- Gelcoat (Black) – Hull side stripes
	- Gelcoat (Red) Ashland code 60012 - Hull color

6. Contractor shall plug all deck openings and discharges as well as taking other measures necessary to prevent any liquids from contaminating areas being prepared or coated. The Contractor shall also take measures to ensure no damage, unnecessary cleaning or any repair results from either the hull preparation process or coating applications. Measures are also to be taken to ensure that surfaces and equipment other than those specified are not coated by over spray and that any inlets or discharges in the shell will not be blocked by the coating.
7. Deck machinery and other equipment susceptible to damage by coating material are to be protected. All portholes, hull doors, freeing ports, hull openings, anodes, transducers, propeller and shaft and rudder stocks are to be covered by suitable materials to prevent damage or entry of foreign materials when sandblasting, grinding or painting is in progress.

UNDERWATER HULL

8. All underwater hull surfaces including rudder, sea suction inlets, overboard outlets and sea bays are to be cleaned of all loose scale, salts, and marine growth.

HD-03 PAINTING (CONT.)

9. Contractor shall prepare the underwater hull and apply the coating system in accordance with the manufacturer's documentation and recommendations.
10. Contractor shall assume that the wetted hull area is fouled with weed growth. All such surface contaminants and spent antifoulant coating shall be removed with no undue or excessive damage to the underlying coating. Copies of invoices, detailing disposal, shall be provided to the Vessel Representative and the PWGSC inspector.
11. It is estimated that 1 m² of the underwater hull-coating system has failed. These areas will here in after be referred to as "bare areas". These areas shall be prepared prior to applying the final coating, as per the coating manufacturer's recommendations. The Vessel Representative shall witness the point at which sound existing coating is obtained. The end result is to be tight and sound existing coating with no loose or lifting material around periphery of bare areas. The total wetted hull surface from the keel to the water line, approx. 45 m², shall be prepared and coated as follows; the entire wetted hull shall be coated with one coat of Interspeed 640 red.
12. Inside of sea bays (sea wells) and underwater grids are to be treated as per underwater hull.
13. The Contractor shall plug all deck openings and discharges as well as taking other measures necessary to prevent any liquids from contaminating areas being prepared or coated. The Contractor shall also take measures to ensure no damage, unnecessary cleaning or any repair results from either the hull preparation process or coating applications. Measures are also to be taken to ensure that surfaces and equipment other than those specified are not coated by over spray and that any inlets or discharges in the shell will not be blocked by the coating.

Deck machinery and other equipment susceptible to damage by coating material are to be protected. All portholes, hull doors, freeing ports, hull openings, anodes, transducers, propeller and shaft and rudder stocks are to be covered by suitable materials to prevent damage or entry of foreign materials when sandblasting, grinding or painting is in progress.

NOTE TO THE CONTRACTOR:

Applicable to all coating systems within this specification; International paints (existing coatings) shall be used or approval for an alternative coating is obtained from the Vessel Representative in writing. The Contractor is to strictly adhere to the manufacturer's instructions in regard to the application of each coating with relation to humidity, temperature, mixing and application.

ED-01 HYDRAULIC STEERING

1. Contractor shall bid on replacing one 1/2 inch by 10 foot long hydraulic hose.
2. Contractor shall inspect the hydraulic steering system; there is an issue with overheating. The helm will heat up to a temperature that is unbearable to touch on the centre of the steering wheel and control unit located in the forward toilet space.
3. Repair shall be done through work arising PWGSC 1379 document.
4. Contractor shall quote on removing the existing hydraulic steering tank oil & filter and supply and install new hydraulic oil and filter upon completion of the repair.

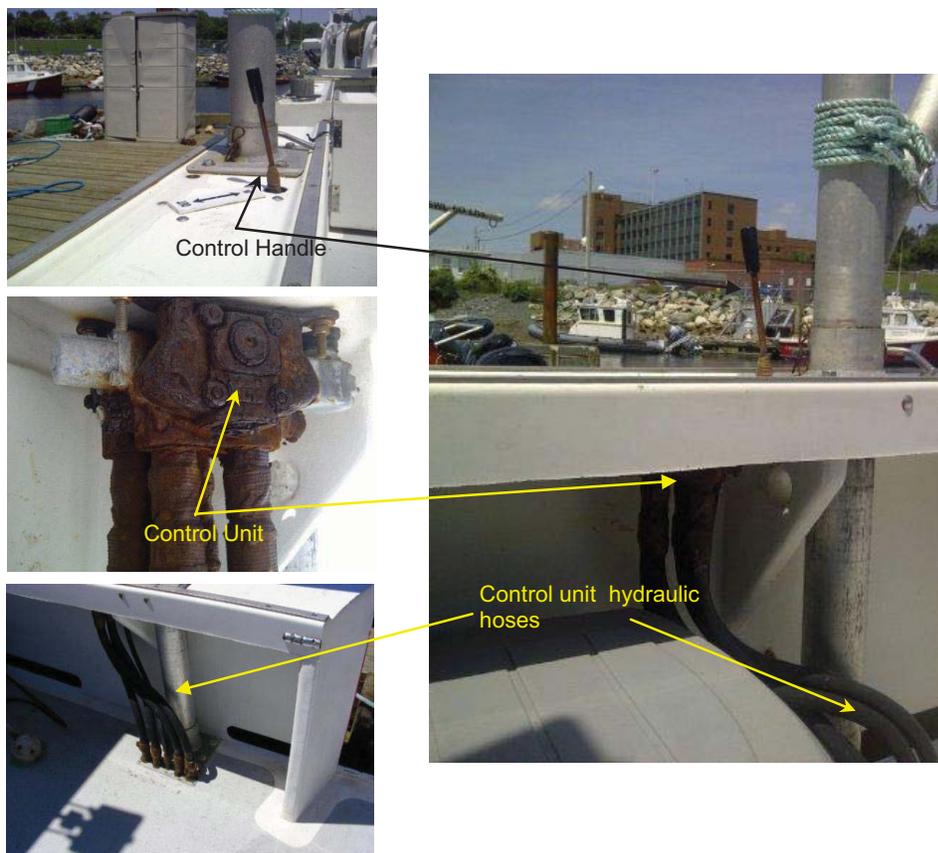
SERIES 10 (200-XXXX-XXX, 220-XXXX-XXX)
Displacement 58.7 - 739 cms³/r 3.58 - 45.1 ins³/r
Flow 11 - 76 l/min 3 - 20 GPM
Pressure 275 bar 4000 PSI



ED-02 HYDRAULIC CONTROLS

DAVIT ARM CONTROLS

1. Contractor shall remove and dispose of the existing hydraulic control handle/unit and five existing hydraulic hoses from their deck connections.
2. Contractor shall supply and install a new control unit with handle, similar rating and function as the one being removed.
3. Contractor shall supply and install five new hydraulic hoses (four at $\frac{3}{4}$ inch and 1 at $\frac{3}{8}$ inch) with the new control unit at lengths that allow the unit to be positioned correctly.
4. The new control handle shall be protected from the weather, to prevent it from freezing up during winter months. Contractor shall supply and install a heavy duty boot type protection to prevent water from collecting around the controls and freezing. Water shall not be able to drain down through or pool around the control handle's access hole on the gunwale.
5. All hydraulic connections shall be denso taped to prevent corrosion.

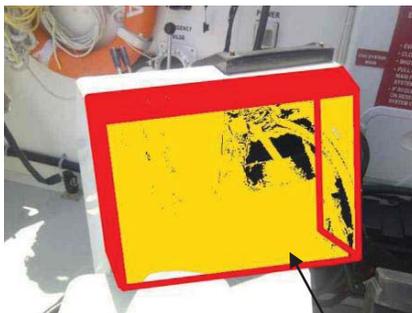


ED-02 HYDRAULIC CONTROLS (CONT.)

6. Contractor shall supply and install a new label (similar to original) indicating direction "IN" and "OUT" to identify direction of hauler movement or if possible reuse original if salvageable.
7. Contractor shall prove the correct operation of the new control unit (similar to existing operation) to the satisfaction of the Vessel's Representative.

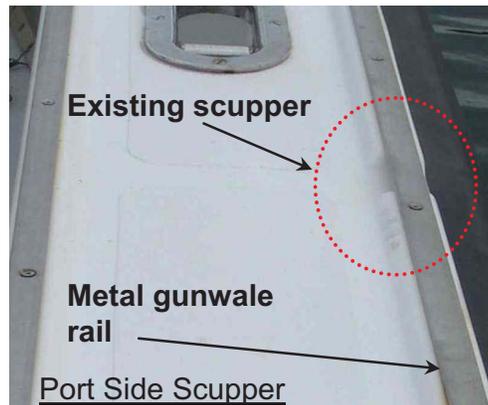
CONTROL STAND

8. Contractor shall fabricate and install new low profile covers for the aft HIAB/Winch hydraulic control station.
9. The back cover shall be bolt on for easy removal and fitted with a water tight seal around the entire perimeter where it contacts the control station. The cover shall prevent water from contacting the internal control units.
10. The front cover shall be bolt on for easy removal and fitted with a water tight seal around the entire perimeter where it contacts the control station. The cover shall prevent water from contacting the main controls. The new cover shall be fitted with a hinged latch enabled front door. When in the close position and latched, it will prevent water from contacting the controls. When the front door is in the open position it will lay flat on the top cover and latched to prevent premature closure.

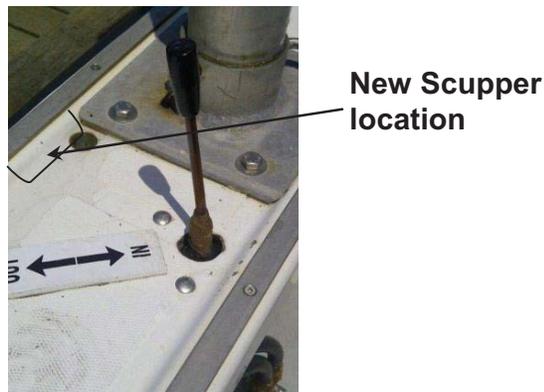


ED-02 HYDRAULIC CONTROLS (CONT.)

11. Contractor shall install a new gunwale scupper on the starboard side of the vessel, near the existing gunwale drain hole at the base of the davit post.
12. Contractor shall remove the starboard metal gunwale rail to complete this specification work and reinstall upon completion in good order. The new scupper shall be similar to the existing scupper on the port side gunwale, picture below.



13. Contractor shall cut out the scupper to the similar size as the existing port side scupper and re-fiberglass and prep the area upon completion. The scupper shall be sealed and 2 coats of white gelcoat applied.



14. Final design shall be to the satisfaction of the Vessel's Representative.
15. Upon completion the contractor shall prove water tight with garden hose.

ED-03 A-FRAME CLEATS

1. Contractor shall supply and install two 8 inch stainless steel (316) cleats to the port and starboard side of the aft A-Frame. Fasten each cleat to the A-Frame plate with contractor supplied stainless steel bolts, stainless steel washers and stainless steel nylock nuts.
2. Cleats can be purchased from Stright MacKay, part number listed below.



3. Approximate location identified in the attached pictures;



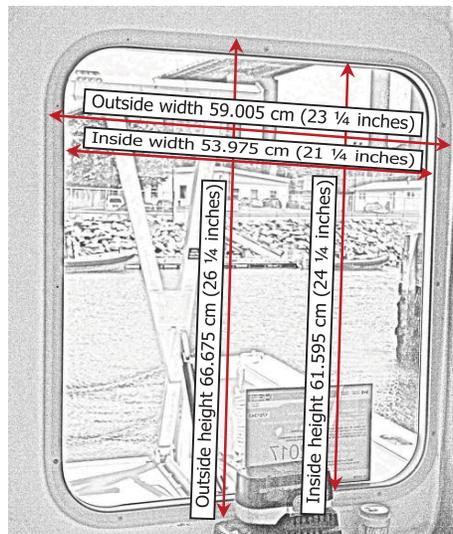
ED-04 AFT WHEELHOUSE WINDOW

1. Contractor shall remove the existing port side aft wheelhouse window as identified below and supply and install a new operating (sliding) window.
2. Contractor supplied window shall be clear, not tinted and meet Transport Canada regulation; such as minimum glass thickness of 5mm.
3. Contractor shall prove new window water tight, by water hose, after completion of installation.

Original supplier - <http://marinelitewindows.com/eng/>



Existing window



Window measurements



New window



ED-05 ANODES

1. Contractor shall remove the existing underwater hull anode remains.
2. Contractor shall supply and install the following new anodes;

Two new rudder anodes (similar to picture below)

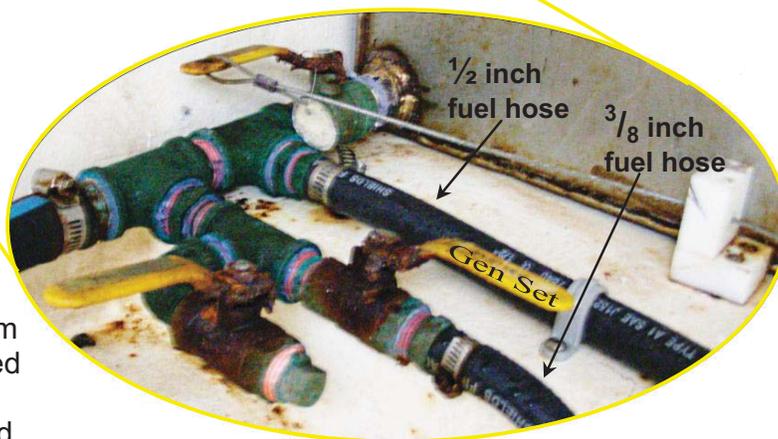
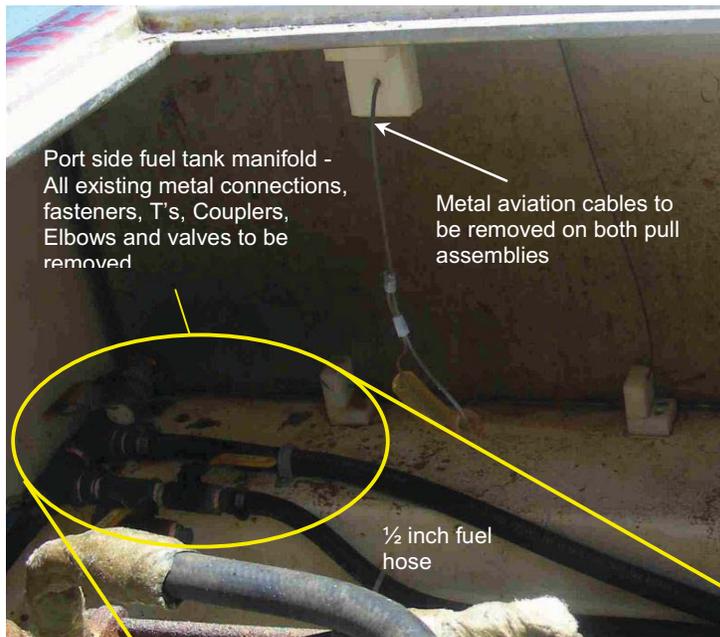


One new shaft anode (similar to picture below)



ED-06 FUEL SYSTEM MANIFOLD

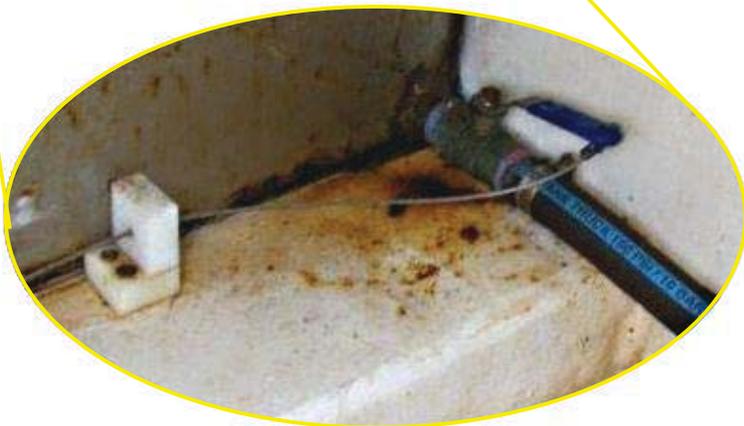
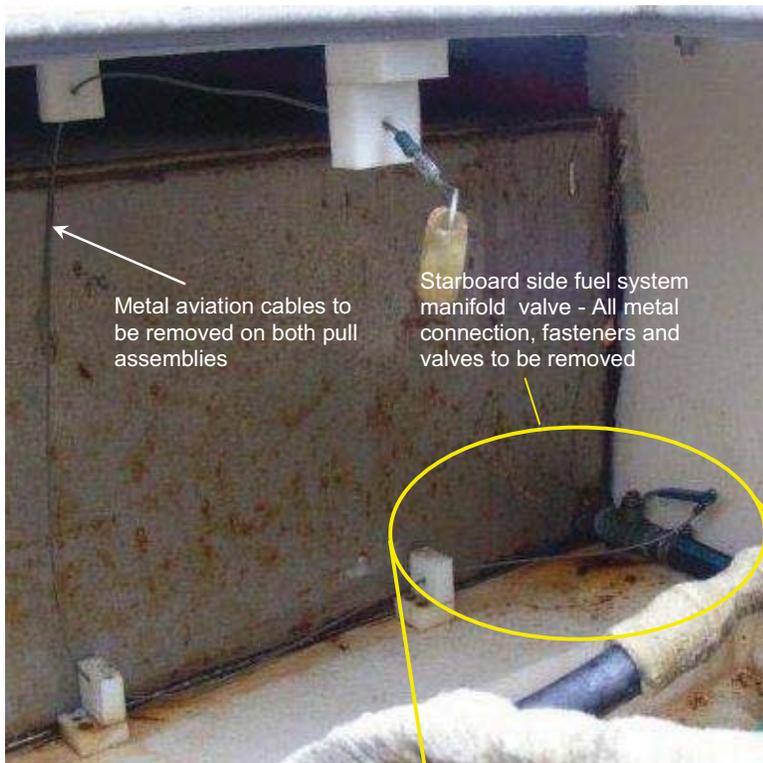
1. Contractor shall remove the existing fuel system manifold located in the steering space, aft deck. The manifold consists of ball valves (3 port side and 1 starboard side), T's (3 port side), couplers, a plug and an elbow.
2. Contractor shall remove and dispose of the existing aviation pull cables for the port and starboard fuel shut off valves.



This complete fuel system manifold shall be removed and renewed with all stainless steel fittings and valves.

FUEL SYSTEM MANIFOLD

ED-06 FUEL SYSTEM MANIFOLD (CONT.)

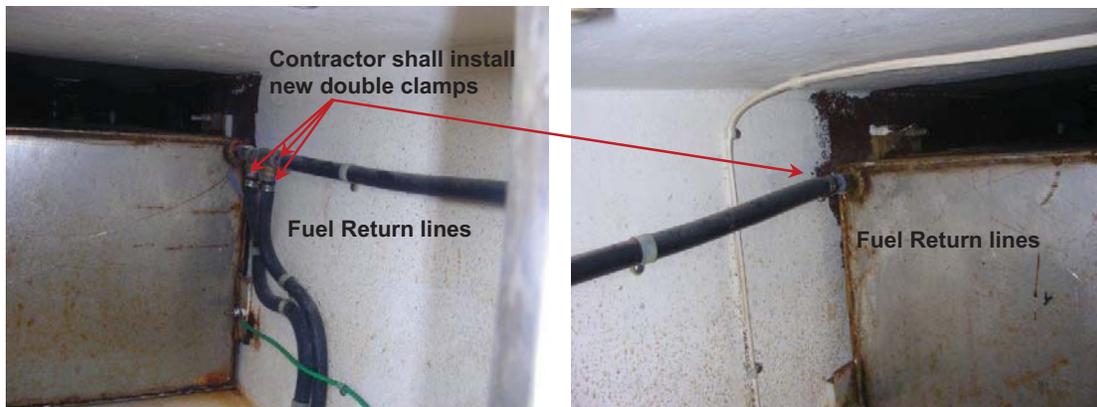


FUEL SYSTEM MANIFOLD – starboard Valve

3. Contractor shall supply and install new stainless steel ball valves, T's, and couplers for the fuel system manifold as per the original layout for the port and starboard side fuel system.

ED-06 FUEL SYSTEM MANIFOLD (CONT.)

- Contractor shall supply and install new stainless steel hose clamps for every connection on the fuel system manifold. "All connections shall be double clamped".



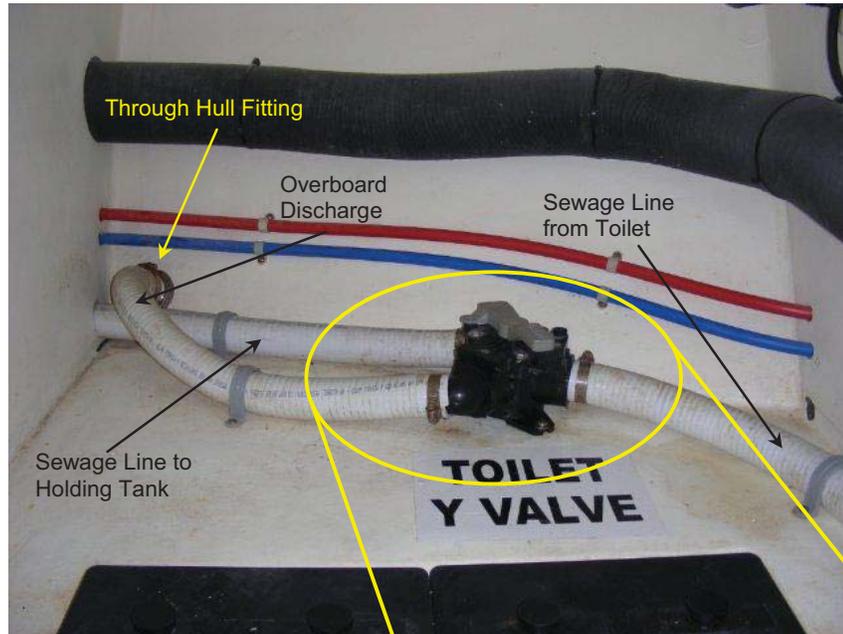
- Contractor shall supply and install new port and starboard clear coated (nylon type) stainless steel aviation cables (coating allows for easy movement) and crimps, similar in length, function and design as original.

ED-06 FUEL SYSTEM MANIFOLD (CONT.)

6. Contractor shall drill a hole in each of the two new fuel tank valve handles as per the original design and connect the new stainless steel aviation cable as per the original design. Contractor shall prove the operation of the pull cable to ensure each fuel tank valve shuts down with little effort.
7. Contractor to use existing fuel lines where possible.
8. Contractor shall test the fuel system to prove no leaks exist at each connection.
9. All work shall be to the satisfaction of the Vessel's Representative.

ED-07 SEWAGE “Y” VALVE

1. Contractor shall remove the existing sewage overboard discharge “Y” valve. The valve is located in the wheelhouse under the deck hatch, in front of the cuddy stairwell.



ED-07 SEWAGE “Y” VALVE (CONT.)

2. Contractor shall remove and dispose of the sewage line from the Y valve to the overboard discharge through hull fitting.
3. Contractor shall supply and install new heavy duty stainless steel hose clamps on all connections; each connection shall be double clamped.

Hose clamp shown below and available from Stright MacKay on page 196.



GBS Heavy Duty Hose Clamps – Stainless Steel

- rolled edges and flexible stainless steel band for maximum clamping force; all stainless steel including nut and bolt
- perfect for heavy hoses with helical reinforcements

Size shown fits hose OD.

Hose OD Size in.	Clamp No.	Item No.	Price
¾" Wide Band			
1 1/16 – 1 2/32	45	23-710N	5.15
1 2/32 – 2 1/32	49	23-711N	5.25
2 1/32 – 2 5/32	53	23-712N	5.35
2 5/32 – 2 5/16	57	23-713N	5.50
2 5/16 – 2 15/32	61	23-714N	5.85
2 15/32 – 2 11/16	66	23-715N	5.95

4. Once the Y valve is removed, Contractor shall connect the existing toilet hose to the existing holding tank hose in the space using a heavy duty coupling and new stainless steel clamps. All connections shall be double clamped.
5. Contractor shall remove the existing through hull fitting located in the space.
6. Contractor shall fiberglass in the existing through hull hole once the fitting is removed to achieve a water tight repair. Completed work shall be as solid as the surrounding hull area. The exterior hull work shall be smooth and blend into the existing hull. Contractor shall prep area for final coating. Work shall be completed prior to hull painting, section HD-03.
7. Contractor shall test the completed sewage system overhaul using fresh water to ensure there are no leaks. Work shall be to the satisfaction of the Vessel’s Representative.

Page 22	Page 22
Open Base Cleats – 316 Stainless Steel	Taquets à base ouverte – Acier inoxydable 316
72-122N 8"	72-122N 8 po
Page 23	Page 23
Outside width 59.005 cm (23 ¼ inches)	Largeur extérieure 59,005 cm (23 ¼ po)
Inside width 53.975 cm (21 ¼ inches)	Largeur intérieure 53,975 cm (21 ¼ po)
Outside height 66.675 cm (26 ¼ inches)	hauteur extérieure 66,675 cm (26 ¼ po)
Inside height 61.595 cm (24 ¼ inches)	hauteur intérieure 61,595 cm (24 ¼ po)
Page 25	Page 25
Gen Set	Groupe électrogène
Page 27	Page 27
Gen Set	Groupe électrogène
Page 29	Page 29
TOILET Y VALVE	VANNE D'EAUX USÉES EN Y
PAGE 30	Page 30
GBS Heavy Duty Hose Clamps – Stainless Steel	Colliers de serrage de tuyau robustes GBS – acier inoxydable
Rolled edges and flexible stainless steel band for maximum damping force; all stainless steel including nut and bolt	Bords arrondis et cerclage en acier inoxydable pour une force d'amortissement maximale; fabriqués entièrement en acier inoxydable, y compris le boulon et l'écrou.
Perfect for heavy hoses with helical reinforcements	Parfait pour les tuyaux robustes avec renforcement hélicoïdal
Size shown fits hose OD.	La taille illustrée correspond au diamètre extérieur du tuyau
Hose OD Size in.	Diamètre extérieur du tuyau en po
Clamp No.	N° du collier
Item No.	N° d'article
Price	Prix
¾" Wide Band	Cerclage de ¾ po
23-710N	23-710N