

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**

11 Laurier St. / 11, rue Laurier

Place du Portage , Phase III

Core 0A1 / Noyau 0A1

Gatineau

Québec

K1A 0S5

Bid Fax: (819) 997-9776

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal 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.

**Proposition 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 sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet MARINE KNUCKLE BOOM CRANES	
Solicitation No. - N° de l'invitation F7049-130167/A	Date 2013-12-02
Client Reference No. - N° de référence du client F7049-130167	
GETS Reference No. - N° de référence de SEAG PW-\$\$ML-043-24152	
File No. - N° de dossier 043ml.F7049-130167	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-01-14	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Byron, Dan	Buyer Id - Id de l'acheteur 043ml
Telephone No. - N° de téléphone (819) 956-0691 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

Raison sociale et adresse du

fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Marine Machinery and Services / Machineries et services maritimes

11 Laurier St. / 11, rue Laurier

6C2, Place du Portage

Gatineau

Québec

K1A 0S5

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. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

The Contractor must provide **two (2) Knuckle Boom Cranes** in accordance with Requirement at Annex "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.

1.1 SACC Manual Clauses

B1000T (2007-11-30) Condition of Material

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.

2.1 Delivery

While delivery is requested by 01 August, 2014, the best delivery that could be offered is _____.

3. Enquiries - Bid Solicitation

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

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

4. Optional Site Visit - Vessel

The CCGS Cygnus will be made available for an **optional** site visit of the vessel. The site visit will be held on **December 12, 2013 at 10:00**, CCG Base, St. John's, NFLD. Bidders interested in viewing must communicate with the Contracting Authority no later than **two (2) working days** before the scheduled visit to confirm attendance and provide the name(s) of the person(s) who will attend. Bidders who do not confirm attendance and provide the name(s) of the person(s) who will attend as required will not be allowed access to the site. Bidders will be requested to sign an attendance form. 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.

5. Availability of Drawings

Drawings are available upon request. Bidders are to e-mail their request for drawings to: Dan.Byron@tpsgc-pwgsc.gc.ca specifying the PWGSC File No. Bidders are responsible to request drawings early enough to ensure that the drawings are received (through regular mail) before bid closing.

6. Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in **Newfoundland and Labrador**.

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.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Technical Bid (1 hard copy)

Section II: Financial Bid (1 hard copy)

Section III: 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) (<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: Technical Bid

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

1.1 Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: 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 technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

Bidder must submit their technical bid in accordance with Annex "A" - Requirement.

1.2 Financial Evaluation

SACC Manual Clause A0222T (2013-04-25), Evaluation of Price

2. Basis of Selection - Multiple Items

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

PART 5 - CERTIFICATIONS

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

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

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

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.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.hrsdc.gc.ca/eng/labour/index.shtml)" list (<http://www.hrsdc.gc.ca/eng/labour/index.shtml>) available from Human Resources and Skills Development Canada (HRSDC) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.hrsdc.gc.ca/eng/labour/index.shtml)" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

The Contractor must provide two (2) **Knuckle Boom Cranes** in accordance with the Requirement at Annex "A".

3. 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.

3.1 General Conditions

2010A (2013-04-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables must be received on or before _____.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Dan Byron
Supply Officer
Public Works and Government Services Canada
Acquisitions Branch
Marine Systems Directorate
Place du Portage, Phase III -6C2
11 Laurier St.
Gatineau, QC
K1A 0S5
Telephone : 819-956-0691
Facsimile: 819-956-0897
E-mail address: dan.byron@tpsgc-pwgsc.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.

Solicitation No. - N° de l'invitation

F7049-130167/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

043ml

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

F7049-130167

File No. - N° du dossier

043mlF7049-130167

CCC No./N° CCC - FMS No/ N° VME

5.2 Project Authority

The Project Authority for the Contract is:

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone : _____

Facsimile: _____

E-mail address: _____

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

6. Payment

6.1 Basis of Payment - Firm Unit Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm unit price as specified in the Line Item Detail. Customs duties are included and Applicable Taxes are extra.

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.

6.2 Limitation of Price

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

6.3 Method of Payment

SACC Manual clause H1001C (2008-05-12) Multiple Payments

6.4 SACC Manual Clauses

C2000C (2007-11-30) Taxes - Foreign-based Contractor

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions.
2. Invoices must be submitted on the supplier's own invoice form and must be prepared to show:
 - (a) The date
 - (b) Name and address of the consignee

- (c) Item number, quantity, part number, reference number and description
- (d) Contract number.

3. Invoices must be distributed as follows:

- (a) The original and one (1) copy of all invoices must be forwarded to the appropriate consignee(s)

- (b) One (1) copy must be forwarded to:

DFO - Canadian Coast Guard
 VLE MLM Program
 Integrated Technical Services
 200 Kent Street, STN 7N157
 Ottawa Ontario
 K1A 0E6

- (c) One (1) copy must be forwarded to the contracting authority.

Dan Byron
 PWGSC
 Marine Systems
 6C2, Phasse III
 11 Laurier St,
 Gatineau Quebec,
 K0A 0S5
 Email: dan.byron@pwgsc.gc.ca
 Phone: (819) 956-0691

4. Payment will only be made on receipt of satisfactory invoices duly supported by specific release documents and/or other documents called for under this document. Invoices are not be submitted prior to shipment of materiel.

5. If payment is to be made to an address other than the address on the cover page of the contract, it is to be clearly identified within the body of the contract as the "Remit to" address. This address should include the following:

Company name
 Full Address
 City
 Province/State
 Postal/Zip Code

8. Certifications

8.1 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.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____. (The contracting authority will insert the name of the province or territory as specified by the Bidder in its bid, if applicable)

10. 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) 2010A (2013-04-25) General Conditions - Goods (Medium Complexity);
- (c) Annex "A" - Requirement;
- (d) the Contractor's bid dated _____ (The contracting authority will insert the date of bid).

11. SACC Manual Clauses

B7500C (2006-06-16) Excess Goods
D9002C (2007-11-30) Incomplete Assemblies

12. Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:

- a. Free on Board (Destination) common carrier to CCG Base - CCGS Cygnus St. John's NFLD, 280 Southside Rd. St. John's, NL A1H 1A7 for shipments from the United States government; or.
- b. Delivered Duty Paid (DDP) to CCG Base - CCGS Cygnus St. John's NFLD, 280 Southside Rd. St. John's, NL A1H for shipments from a commercial contractor

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Engineering and Supply of Marine Knuckleboom Crane		

Part 1: PURPOSE

- 1.1 This statement of requirements is intended to provide a guide for Contractors when preparing proposals for the supply of two (2) identical electro-hydraulic, “Knuckleboom” type cranes for the CCGS Cygnus.
- 1.2 The new cranes will replace previous Knuckleboom cranes which were fitted forward of the wheelhouse, starboard at Fr. 67-68 on the Forecastle Deck and aft on the Forecastle Deck, starboard at Fr. 21-22.
- 1.3 The ship will be available for the viewing of project requirements at the Canadian Coast Guard Base, St. John’s, NL on December 12, 2013 at 10 am.
- 1.4 Proposals must demonstrate an understanding of all the requirements described in this document. The proposals will be evaluated on the basis of the following criteria:
 - a. Demonstrated completeness and quality of the proposal. This is best achieved by responding to each section of this document and stating and / or showing that its requirements are understood. (Ref. Sections 1.1 and entire document).
 - b. Demonstrated marine experience of the Crane Manufacturer and Sub-Contractors (Ref. Sections 2.1, 2.2, 2.3) = **Potential Contractors must demonstrate evidence of meeting this requirement or be deemed non-compliant.**
 - c. Regional lifecycle support capability of the Crane Supplier (Ref. Section 2.3) = **Potential Contractors must demonstrate evidence of meeting this requirement or be deemed non-compliant.**
 - d. Ability of the Crane to meet Operational Requirements (Ref. Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8) = **Potential Contractors must demonstrate evidence of meeting this requirement or be deemed non-compliant.**
 - e. Ability of the Crane to meet Technical Requirements (Ref. Sections 4.1, 4.2, 4.4, 4.5, 4.7, 4.8, 4.9) = **Potential Contractors must demonstrate evidence of meeting this requirement or be deemed non-compliant.**
 - f. Ability to meet Delivery Requirements (Ref. Sections 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7) = **Potential Contractors must demonstrate evidence of meeting this requirement or be deemed non-compliant.**

Part 2: GENERAL REQUIREMENTS

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- 2.1 The new marine knuckle boom cranes shall be of an established marine design, operationally proven on ships in Eastern Canadian / North Atlantic waters on a year-round basis. Contact references for a minimum of three (3) installations shall be included with the bid. Negative feedback will deem the bid non responsive.
- 2.2 The proposed knuckle boom crane design shall be fully approved by at least one recognized member of the International Association of Classification Societies (IACS) and the Delegated Statutory Inspection Program (DSIP). Appropriate classification society approval document(s) for proposed cranes must be included with Contractors' proposals.
- 2.3 The knuckle boom crane shall be supported by a **service and parts facility** located within the ship's operational area which is the province of Newfoundland and Labrador. Proposals are to identify the location of this facility, the services offered and key personnel.
- 2.4 The deliverables shall include the engineering, construction, and certification for the Knuckleboom crane pedestal and hydraulic power unit.

Part 3: OPERATIONAL REQUIREMENTS

- 3.1 The proposed knuckleboom cranes shall have a lifting capacity of 12 – 13 tonne-meters (118 – 127 KNm) with a Safe Working Load (SWL) of 1.1 – 1.0 tonnes at a “hydraulic reach” of 11.5 – 12.0 meters with a safety factor of 5. All bidders are to clearly state the lifting capacity of their proposed cranes. “Hydraulic reach” is the outreach of the crane using only the hydraulically telescoping boom sections.
- 3.2 The bare crane shall not exceed 2400 kg in mass, and when stowed, shall not be higher than 2.6 m or wider than 3.4 m.
- 3.3 The proposed knuckleboom crane shall be capable of achieving this lifting capability when the ship is heeled to either port or starboard, and trimmed either forward or aft. All bidders are to clearly state the maximum static angles of heel (list) and trim that the ship is permitted have while achieving the full lifting capacity of their proposed cranes. The maximum static angle of heel or trim shall be within the range of 6 to 8 degrees.
- 3.4 The proposed knuckleboom crane shall have a 380-410 degree slewing range fitted with a double rack and pinion slewing system fitted with an oil bath arrangement. All bidders are to clearly state the slewing range of the proposed cranes.
- 3.5 Preference shall be given to knuckleboom cranes that can be used for towing submerged gear over the vessel's side while the ship is under way at low speed (5 knots or less). The crane would be deployed at an angle between 45 and 90 degrees

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from the vessel's longitudinal centerline and would be subjected to side loads of up to 1000 kg. All bidders are to clearly state their proposed crane's fitness for this purpose and its slewing torque capacity.

- 3.6** The crane's winch shall be of a planetary TC2 design or equivalent with the following capabilities:
- 3.6.1** Hoisting (line pull) capability of 2700 KG with a bare drum and 1800 KG with a full drum (44 meters) of 11 mm wire,
 - 3.6.2** Automatic braking arrangement with proportional control providing variable speeds from creeping (1 m/min) to maximum speed,
 - 3.6.3** Anti-two block safety incorporated and operable,
 - 3.6.4** Capability to be lowered in an emergency situation such as loss of electrical power.

All proposals shall clearly indicate the maximum speed and capacity of the crane's winch and describe the winch speed control features.

- 3.7** The proposed knuckleboom cranes shall be supplied complete with one (1) hand-held, wired, remote control operating systems, backed up by controls mounted on the crane /pedestal/stand with weatherproof cover per crane. The remote control units shall have a cable length of no less than 10 meters and shall be fitted with an emergency stop switch. The remote control unit and associated gear shall be suited to shipboard service at sea, and shall allow full functionality of the proposed knuckleboom crane. Potential Contractors are to provide a detailed description of their remote control units as part of their proposals, and indicate those features which make them suitable for this application.
- 3.8** Bidders shall identify all the safety features of their proposed cranes including overload protection, load retaining capabilities of winch / cylinders, and system / operator protection in the event of a hydraulics failure.

Part 4: PROOF OF PERFORMANCE

- 4.1** Unless specified otherwise, all supplied components, materials and installations shall be adequate to meet the following minimum service conditions:
- 4.1.1** Outside Air Temperature of -40 °C to +35 °C;
 - 4.1.2** Wind Velocity of 50 Knots;
 - 4.1.3** Sea State of 1 (calm).

It is recognized that these service conditions exceed the requirements of classification societies. If these conditions are not fully satisfied, bidders are to

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clearly state the extent to which their proposed cranes meet the specified service conditions.

- 4.2** Unless noted otherwise, all components of the knuckleboom crane are to be corrosion-resistant to ensure long-lasting protection against corrosion in a salt-water marine environment. Bidders are to provide a detailed description of the materials and anti-corrosive treatments to be used as part of their proposals.
- 4.3** The deck seats and pedestals of the proposed cranes shall be located on the forward of the wheelhouse at Fr. 67-68 and at Fr. 21-22, starboard on the Forecastle Deck. A new deck seat will be fabricated for the forward crane and the after seat shall be reused for the mounting of the after crane. Fabrication of deck seats are not to be addressed by this contract.
- 4.4** The proposed knuckleboom cranes shall be delivered with self-contained, electro-hydraulic power units that shall be mounted within the interior of the ship, remotely located to the cranes, in the existing locations of the current hydraulic power units.

The hydraulic power units shall be supplied complete with a totally-enclosed , fan-cooled electric motor(s); pump(s); reservoir; anti-condensation heater; directional control valves; vent and fill pipes; level gauge; and all required valves, filters, strainers and gauges to meet regulatory requirements and make the system fully functional.

Bidders shall create the size of their hydraulic power unit footprint and mounting arrangement on the existing deck seat.

- 4.5** The crane is to operate from an existing electrical supply of 440V/3ph/60Hz. The suitability of the existing electrical supply arrangements are to be surveyed and confirmed by the Bidder, or an Engineering Consultant employed by the Bidder.
- 4.6** All required electrical work shall conform to the requirements of the Transport Canada Publication TP127 – Ships Electrical Standards.
- 4.7** All hydraulic tubing shall be of one-piece, seamless, annealed stainless steel (AISI 316) construction. All hydraulic hoses shall be SAE 100R2 high-pressure, steel wire reinforced, rubber-covered hydraulic hose. To the greatest extent possible, all hydraulic fittings, adapters and other connections shall be JIC Standard, high pressure, flareless, reusable, stainless steel (AISI 316) type. Bidders are to clearly identify the extent to which they meet this requirement in their proposals.
- 4.8** Wire ropes shall be of non-rotating or rotation-resistant, right regular lay and IWRC construction. The breaking tensile strength shall be not less than six times the safe working load of the crane.

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- 4.9** All crane components of carbon steel construction are to be abrasive blasted to “near white” blast (SSPC-SP 10) prior to coating and then be coated with a high performance, low maintenance, marine coating. Special attention shall be given to those areas, such as the interior of boom sections and other hard-to-reach areas that will not be subject to touch-up painting when the crane is in service. All extension booms shall be hot dip galvanized. The crane and hydraulic power unit shall have an overall topcoat finish in "RAL 1001 BEIGE" to match other deck machinery on the ship. Contractors are to fully describe the coatings scheme that will be used including those features that make their crane especially suitable for shipboard service. This shall also extend to designs that do not have open penetrations in the main crane column for the passage of hydraulic hoses.
- 4.10** Once the new knuckleboom cranes are installed (under separate contract), the completed installation will be subjected to tests in accordance with the Canada Shipping Act, 2001 – Cargo, Fumigation, and Tackle Regulations which require cranes in this range to be subjected to a Proof Load Test of 1.25 times the SWL.

Part 5: DELIVERY REQUIREMENTS

- 5.1** The Contractor shall deliver the new knuckleboom cranes to the CCG Base St. John’s - CCGS Cygnus, St. John’s NFLD, 280 Southside Rd. St. John’s, NL A1H. Delivery shall be no later than 01 August, 2014.
- 5.2** Each of the proposed knuckleboom cranes shall be delivered complete with its corresponding hydraulic power unit, winch, wire rope, remote control unit and any other components required for a fully operational system.
- 5.3** All components of the proposed knuckleboom cranes are to be effectively preserved, packaged and protected for shipment with the possibility of outside storage prior to installation. Any damages incurred during shipment and storage due to inadequate protection or improper handling are to be the sole responsibility of the Contractor and/or those acting on the Contractor’s behalf.
- 5.4** Delivery of the proposed knuckleboom cranes shall include all necessary **spare parts** and special **tools** required for installation, testing, commissioning and trials and shall be included for each of the new cranes.
- 5.5** The Bidder shall supply all drawings and specifications, in the English language, in both electronic and paper formats. The electronic formats shall be compatible with Microsoft, Adobe, and / or AutoCAD.
- 5.6** The Contractor shall deliver to the above address, three (3) copies of all test certificates for all wire ropes, shackles, sheaves, and hooks that form part of the proposed knuckleboom cranes. These certificates are to be manufacturer / supplier

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test certificates documenting the test loads and / or breaking strengths of all supplied items and materials.

- 5.7** The Contractor shall deliver to the above address, three (3) copies, in both electronic and paper formats, of comprehensive manuals describing the full installation, operation, and maintenance requirements of the new knuckleboom cranes. The manuals are to be completely legible and written in the English language. French language manuals shall also be included should they be available.