



**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions  
Travaux publics et Services gouvernementaux  
Canada  
Pacific Region  
401 - 1230 Government Street  
Victoria, B.C.  
V8W 3X4  
Bid Fax: (250) 363-3344

**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**

<b>Title - Sujet</b> CCGS S.W. Grenfell - Deck Crane	
<b>Solicitation No. - N° de l'invitation</b> F1782-19C020/A	<b>Date</b> 2020-01-10
<b>Client Reference No. - N° de référence du client</b> F1782-19C020	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$XLV-176-7907	
<b>File No. - N° de dossier</b> XLV-9-42175 (176)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2020-02-19</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Pacific Standard Time PST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Godin, Andre	<b>Buyer Id - Id de l'acheteur</b> xlvl76
<b>Telephone No. - N° de téléphone</b> (250) 216-2504 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> Fisheries and Oceans Canada See herein	

**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**  
Public Works and Government Services Canada - Pacific  
Region  
401 - 1230 Government Street  
Victoria, B. C.  
V8W 3X4

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

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## **PART 1 - GENERAL INFORMATION**

### **1.1 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 and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Requirement, the Basis of Payment, the Electronic Payment Instruments, the Federal Contractors Program for Employment Equity - Certification, the Insurance Requirements, any other annexes.

### **1.2 Summary**

The Canadian Coast Guard has a requirement to procure a new Class approved Electro Hydraulic Marine Knuckle Boom Crane (KB Crane), to install (at later date) onboard the Canadian Coast Guard Ship (CCGS) Sir Wilfred Grenfell (the vessel).

#### **1.2.1 The Federal Contractors Program (FCP) for employment equity**

The Federal Contractors Program (FCP) for employment equity applies to this procurement; refer to Part 5 – Certifications and Additional Information, Part 7 - Resulting Contract Clauses and the annex titled Federal Contractors Program for Employment Equity – Certification.

#### **1.2.2 Epost Connect**

This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

#### **1.2.3 Sourcing Strategy**

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Canadian Free Trade Agreement (CFTA).

#### **1.2.4 Phased bid Compliance Process**

The Phased Bid Compliance Process applies to this requirement

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### **1.3 Debriefings**

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

## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<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](#) (2019-03-04) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days  
Insert: 120 days

### **2.2 Submission of Bids**

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

**Address:**

Bid Receiving Public Works and Government Services Canada  
Pacific Region  
401-1230 Government Street  
Victoria, BC  
V8V 3X4

**epost Connect email:**

[TPSGC.RPReceptiondessoumissions-PRBidReceiving.PWGSC@tpsgc-pwgsc.gc.ca](mailto:TPSGC.RPReceptiondessoumissions-PRBidReceiving.PWGSC@tpsgc-pwgsc.gc.ca)

**Note:** Bids will not be accepted if emailed directly to this email address. This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions [2003](#), or to send bids through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

**Bid Facsimile number:**

(250) 363-3344

### **2.3 Former Public Servant**

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

## Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

## Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

## Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

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For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

#### **2.4 Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than **5 business 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 question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

#### **2.5 Applicable Laws**

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

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

#### **2.6 Improvement of Requirement During Solicitation Period**

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least **10 days** before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

#### **3.1.1 Option 1 – Epost**

If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid  
Section II: Financial Bid  
Section III: Certifications

#### **3.1.2 Option 2 - Hard copies**

If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid, 3 hard copies and 1 soft copies on CD  
Section II: Financial Bid, 3 hard copies and 1 soft copies on CD  
Section III: Certifications, 3 hard copies and 1 soft copies on CD

If there is a discrepancy between the wording of the soft copy on electronic media and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

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 hard copy 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](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573). 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 demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

## **Refer to Annex F**

## **Section II: Financial Bid**

Bidders must submit their financial bid in accordance with Annex "D" Financial Presentation Sheet and Annex "E" Pricing Data Sheet (PDS). All prices must be in Canadian dollars, Delivered Duty Paid (DDP) Incoterms 2000 included or listed separately as one amount for deliveries, if applicable. The total amount of Applicable Taxes must be shown separately.

The Financial Bid shall also include:

- (a) The full legal name of the Bidder;
- (b) Complete contact information of the company representative responsible for the proposal;

### **3.1.2 Electronic Payment of Invoices – Bid**

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex "G" Electronic Payment Instruments, to identify which ones are accepted.

If Annex "G" Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

### **3.1.3 Exchange Rate Fluctuation**

The requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non responsive.

## **Section III: Certifications**

Bidders must submit the certifications and additional information required under Part 5.

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## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

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

Canada will use the Phased Bid Compliance Process described below.

#### **4.1.1 Phased Bid Compliance Process**

##### **4.1.1.1 (2018-07-19) General**

- (a) Canada is conducting the PBCP described below for this requirement.
- (b) Notwithstanding any review by Canada at Phase I or II of the PBCP, Bidders are and will remain solely responsible for the accuracy, consistency and completeness of their Bids and Canada does not undertake, by reason of this review, any obligations or responsibility for identifying any or all errors or omissions in Bids or in responses by a Bidder to any communication from Canada.

THE BIDDER ACKNOWLEDGES THAT THE REVIEWS IN PHASE I AND II OF THIS PBCP ARE PRELIMINARY AND DO NOT PRECLUDE A FINDING IN PHASE III THAT THE BID IS NON-RESPONSIVE, EVEN FOR MANDATORY

REQUIREMENTS WHICH WERE SUBJECT TO REVIEW IN PHASE I OR II AND NOTWITHSTANDING THAT THE BID HAD BEEN FOUND RESPONSIVE IN SUCH EARLIER PHASE. CANADA MAY DEEM A BID TO BE NON-RESPONSIVE TO A MANDATORY REQUIREMENT AT ANY PHASE.

THE BIDDER ALSO ACKNOWLEDGES THAT ITS RESPONSE TO A NOTICE OR A COMPLIANCE ASSESSMENT REPORT (CAR) (EACH DEFINED BELOW) IN PHASE I OR II MAY NOT BE SUCCESSFUL IN RENDERING ITS BID RESPONSIVE TO THE MANDATORY REQUIREMENTS THAT ARE THE SUBJECT OF THE NOTICE OR CAR, AND MAY RENDER ITS BID NON-RESPONSIVE TO OTHER MANDATORY REQUIREMENTS.

- (c) Canada may, in its discretion, request and accept at any time from a Bidder and consider as part of the Bid, any information to correct errors or deficiencies in the Bid that are clerical or administrative, such as, without limitation, failure to sign the Bid or any part or to checkmark a box in a form, or other failure of format or form or failure to acknowledge; failure to provide a procurement business number or contact information such as names, addresses and telephone numbers; inadvertent errors in numbers or calculations that do not change the amount the Bidder has specified as the price or of any component thereof that is subject to evaluation. This shall not limit Canada's right to request or accept any information after the bid solicitation closing in circumstances where the bid solicitation expressly provides for this right. The Bidder will have the time period specified in writing by Canada to provide the necessary documentation. Failure to meet this deadline will result in the Bid being declared non-responsive.
- (d) The PBCP does not limit Canada's rights under Standard Acquisition Clauses and Conditions (SACC) 2003 (2019-03-04) Standard Instructions – Goods or Services – Competitive Requirements nor Canada's right to request or accept any information during the solicitation period or after bid solicitation closing in circumstances where the bid solicitation expressly provides for this right, or in the circumstances described in subsection (c).
- (e) Canada will send any Notice or CAR by any method Canada chooses, in its absolute discretion.

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The Bidder must submit its response by the method stipulated in the Notice or CAR. Responses are deemed to be received by Canada at the date and time they are delivered to Canada by the method and at the address specified in the Notice or CAR. An email response permitted by the Notice or CAR is deemed received by Canada on the date and time it is received in Canada's email inbox at Canada's email address specified in the Notice or CAR. A Notice or CAR sent by Canada to the Bidder at any address provided by the Bidder in or pursuant to the Bid is deemed received by the Bidder on the date it is sent by Canada. Canada is not responsible for late receipt by Canada of a response, however caused.

#### 4.1.1.2 (2018-03-13) Phase I: Financial Bid

- (a) After the closing date and time of this bid solicitation, Canada will examine the Bid to determine whether it includes a Financial Bid and whether any Financial Bid includes all information required by the solicitation. Canada's review in Phase I will be limited to identifying whether any information that is required under the bid solicitation to be included in the Financial Bid is missing from the Financial Bid. This review will not assess whether the Financial Bid meets any standard or is responsive to all solicitation requirements.
- (b) Canada's review in Phase I will be performed by officials of the Department of Public Works and Government Services.
- (c) If Canada determines, in its absolute discretion that there is no Financial Bid or that the Financial Bid is missing all of the information required by the bid solicitation to be included in the Financial Bid, then the Bid will be considered non-responsive and will be given no further consideration.
- (d) For Bids other than those described in c), Canada will send a written notice to the Bidder ("Notice") identifying where the Financial Bid is missing information. A Bidder, whose Financial Bid has been found responsive to the requirements that are reviewed at Phase I, will not receive a Notice. Such Bidders shall not be entitled to submit any additional information in respect of their Financial Bid.
- (e) The Bidders who have been sent a Notice shall have the time period specified in the Notice (the "Remedy Period") to remedy the matters identified in the Notice by providing to Canada, in writing, additional information or clarification in response to the Notice. Responses received after the end of the Remedy Period will not be considered by Canada, except in circumstances and on terms expressly provided for in the Notice.
- (f) In its response to the Notice, the Bidder will be entitled to remedy only that part of its Financial Bid which is identified in the Notice. For instance, where the Notice states that a required line item has been left blank, only the missing information may be added to the Financial Bid, except that, in those instances where the addition of such information will necessarily result in a change to other calculations previously submitted in its Financial Bid, (for example, the calculation to determine a total price), such necessary adjustments shall be identified by the Bidder and only these adjustments shall be made. All submitted information must comply with the requirements of this solicitation.
- (g) Any other changes to the Financial Bid submitted by the Bidder will be considered to be new information and will be disregarded. There will be no change permitted to any other Section of the Bidder's Bid. Information submitted in accordance with the requirements of this solicitation in response to the Notice will replace, in full, **only** that part of the original Financial Bid as is permitted above, and will be used for the remainder of the bid evaluation process.

- (h) Canada will determine whether the Financial Bid is responsive to the requirements reviewed at Phase I, considering such additional information or clarification as may have been provided by the Bidder in accordance with this Section. If the Financial Bid is not found responsive for the requirements reviewed at Phase I to the satisfaction of Canada, then the Bid shall be considered non-responsive and will receive no further consideration.
- (i) Only Bids found responsive to the requirements reviewed in Phase I to the satisfaction of Canada, will receive a Phase II review.

#### **4.1.1.3 (2018-03-13) Phase II: Technical Bid**

- (a) Canada's review at Phase II will be limited to a review of the Technical Bid to identify any instances where the Bidder has failed to meet any Eligible Mandatory Criterion. This review will not assess whether the Technical Bid meets any standard or is responsive to all solicitation requirements. Eligible Mandatory Criteria are all mandatory technical criteria that are identified in this solicitation as being subject to the PBCP. Mandatory technical criteria that are not identified in the solicitation as being subject to the PBCP, will not be evaluated until Phase III.
- (b) Canada will send a written notice to the Bidder (Compliance Assessment Report or "CAR") identifying any Eligible Mandatory Criteria that the Bid has failed to meet. A Bidder whose Bid has been found responsive to the requirements that are reviewed at Phase II will receive a CAR that states that its Bid has been found responsive to the requirements reviewed at Phase II. Such Bidder shall not be entitled to submit any response to the CAR.
- (c) A Bidder shall have the period specified in the CAR (the "Remedy Period") to remedy the failure to meet any Eligible Mandatory Criterion identified in the CAR by providing to Canada in writing additional or different information or clarification in response to the CAR. Responses received after the end of the Remedy Period will not be considered by Canada, except in circumstances and on terms expressly provided for in the CAR.
- (d) The Bidder's response must address only the Eligible Mandatory Criteria listed in the CAR as not having been achieved, and must include only such information as is necessary to achieve such compliance. Any additional information provided by the Bidder which is not necessary to achieve such compliance will not be considered by Canada, except that, in those instances where such a response to the Eligible Mandatory Criteria specified in the CAR will necessarily result in a consequential change to other parts of the Bid, the Bidder shall identify such additional changes, provided that its response must not include any change to the Financial Bid.
- (e) The Bidder's response to the CAR should identify in each case the Eligible Mandatory Criterion in the CAR to which it is responding, including identifying in the corresponding section of the original Bid, the wording of the proposed change to that section, and the wording and location in the Bid of any other consequential changes that necessarily result from such change. In respect of any such consequential change, the Bidder must include a rationale explaining why such consequential change is a necessary result of the change proposed to meet the Eligible Mandatory Criterion. It is not up to Canada to revise the Bidder's Bid, and failure of the Bidder to do so in accordance with this subparagraph is at the Bidder's own risk. All submitted information must comply with the requirements of this solicitation.
- (f) Any changes to the Bid submitted by the Bidder other than as permitted in this solicitation, will be considered to be new information and will be disregarded. Information submitted in accordance with the requirements of this solicitation in response to the CAR will replace, in full, **only** that part of the original Bid as is permitted in this Section.

- (g) Additional or different information submitted during Phase II permitted by this section will be considered as included in the Bid, but will be considered by Canada in the evaluation of the Bid at Phase II only for the purpose of determining whether the Bid meets the Eligible Mandatory Criteria. It will not be used at any Phase of the evaluation to increase any score that the original Bid would achieve without the benefit of such additional or different information. For instance, an Eligible Mandatory Criterion that requires a mandatory minimum number of points to achieve compliance will be assessed at Phase II to determine whether such mandatory minimum score would be achieved with such additional or different information submitted by the Bidder in response to the CAR. If so, the Bid will be considered responsive in respect of such Eligible Mandatory Criterion, and the additional or different information submitted by the Bidder shall bind the Bidder as part of its Bid, but the Bidder's original score, which was less than the mandatory minimum for such Eligible Mandatory Criterion, will not change, and it will be that original score that is used to calculate any score for the Bid
- (h) Canada will determine whether the Bid is responsive for the requirements reviewed at Phase II, considering such additional or different information or clarification as may have been provided by the Bidder in accordance with this Section. If the Bid is not found responsive for the requirements reviewed at Phase II to the satisfaction of Canada, then the Bid shall be considered non-responsive and will receive no further consideration.
- (i) Only Bids found responsive to the requirements reviewed in Phase II to the satisfaction of Canada, will receive a Phase III evaluation.

#### **4.1.1.4 (2018-03-13) Phase III: Final Evaluation of the Bid**

- (a) In Phase III, Canada will complete the evaluation of all Bids found responsive to the requirements reviewed at Phase II. Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) A Bid is non-responsive and will receive no further consideration if it does not meet all mandatory evaluation criteria of the solicitation.

#### **4.1.2 Technical evaluation**

- 4.1.2.1 Responses to this Bid solicitation will first be examined to determine their compliance with the mandatory certifications, and the tables of deliverable requirements as detailed in Parts 2 & 5.
- 4.1.2.2 The Bidder's Technical Bid will then be examined to determine compliance with Mandatory Technical Specification items. The Technical Bid must also include **Annex F** completed with verification that the bid meets each mandatory criteria listed and includes the required bid reference information. The technical bid will then be evaluated and points assigned in accordance with the point rated evaluation criteria in **Annex F**.

**The Phased Bid Compliance Process will apply to all mandatory technical criteria.**

#### **4.2 Basis of Selection- - Lowest Price Per Point**

1. To be declared responsive, a bid must:
  - a. comply with all the requirements of the bid solicitation; and
  - b. meet all mandatory criteria; and
  - c. obtain the required minimum of **1105 points** overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of **1700 points**.

2. Bids not meeting (a) or (b) or (c) will be declared non-responsive. Neither the responsive bid that receives the highest number of points nor the one that proposed the lowest price will necessarily be accepted. The responsive bid with the lowest evaluated price per point will be recommended for award of a contract.

Example:

<b>Compliant Bidders:</b>	<b>Cost:</b>	<b>Bidder Score:</b>	<b>Lowest Cost per point:</b>
<b>A</b>	\$500	62	8.06
<b>B</b>	\$520	65	8.00
<b>C</b>	\$580	72	8.05
<b>D</b>	\$700	79	8.86
<b>E</b>	\$1500	98	15.30

**Bid with the lowest Cost per points: B**

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## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

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

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

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

### **5.1 Certifications Required with the Bid**

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

#### **5.1.1 Integrity Provisions - Declaration of Convicted Offences**

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

#### **5.2 Certifications Precedent to Contract Award and Additional Information**

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

##### **5.2.1 Integrity Provisions – Required Documentation**

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

##### **5.2.2 Federal Contractors Program for Employment Equity - Bid Certification**

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the ["FCP Limited Eligibility to Bid"](#) list during the period of the Contract.

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The Bidder must provide the Contracting Authority with a completed annex titled Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

## **PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS**

### **6.1 Security Requirements**

There is no security requirement applicable to this Contract.

### **6.2 Financial Capability**

SACC Manual clause [A9033T](#) (2012-07-16), Financial Capability

### **6.3 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, Insurance Requirement.

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.

### **6.4 Welding Certification – Bid (if applicable)**

1. 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:
  - a. CSA W47.1 :19, Certification of Companies for Fusion Welding of Steel (Minimum Division Level 1 or 2) or ,
  - b. Certification by an International Institute of Welding (IIW) Authorized National Body for Company Certification (ANBCC) to ISO Standard 3834 – 1 or 2.
2. Before contract award and within 48 hours of the written request by the Contracting Authority, the Bidder must submit evidence demonstrating its (or its subcontractor's) certification to the welding standards. In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.

### **6.5 List of Proposed Subcontractors**

If the bid includes the use of subcontractors, the Bidder agrees, upon written request from the Contracting Authority, to provide a list of all subcontractors including a description of the things to be purchased, a description of the work to be performed by specification section and the location of the performance of that work. The list should not include the purchase of off-the-shelf items, software and such standard articles and materials as are ordinarily produced by manufacturers in the normal course of business, or the provision of such incidental services as might ordinarily be subcontracted in performing the Work, i.e. subcontract work valued at less than \$5,000.00.

## **PART 7 - RESULTING CONTRACT CLAUSES**

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

### **7.1 Statement of Work**

The Contractor must perform the Work in accordance with the Statement of Work Annex "A".

The Statement of Work Annex "A" provides the detailed requirements to be met in order to supply a new Class approved Electro Hydraulic Marine Knuckle Boom Crane (KB Crane) for the CCGS Sir Wilfred Grenfell and also to provide the required Engineering Changes (EC) to the new crane.

#### **7.1.1 Optional Goods and/or Services**

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex A –Statement of Work of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

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

#### **7.2.1 General Conditions**

2030 (2018-06-21), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

1031-2 (2012-07-16), Contracting Cost Principles, apply to and form part of the Contract.

#### **7.2.2 Supplemental General Conditions**

4006 (2010-08-16), Contractor to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.

### **7.3 Security Requirements**

There is no security requirement applicable to the Contract.

### **7.4 Term of Contract**

#### **7.4.1 Period of the Contract**

The period of the Contract is from the date of issuing to **June 30, 2022 inclusive**.

#### **7.4.2 Delivery Date**

The crane as per Annex "A" excluding the options must be received on or before **March 1, 2021**.

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### 7.4.3 Delivery point, Shipping Instructions, Delivered Duty Paid

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

Incoterms 2000 "Delivered Duty Paid" (DDP), Canadian customs duties and excise taxes included, to the destinations listed below.

Canadian Coast Guard  
9860 West Saanich Road  
Sidney BC  
V8L 4B2  
Canada.

### 7.5 Authorities

#### 7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Andre Godin  
Title: Manager  
Public Works and Government Services Canada  
Acquisitions Branch  
Directorate: Acquisition, Marine Pacific  
Address: 401- 1230 Government Street  
Victoria, British Columbia,  
V8W 3X4  
Canada  
Telephone: 250-216-2505  
Facsimile: 250-363-0395  
E-mail address: andre.godin3@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.

#### 7.5.2 Technical Authority

The Technical Authority for the Contract is:

Name: TBD  
Title: TBD  
Organization: TBD  
Address: TBD  
Telephone: TBD  
Facsimile: TBD  
E-mail address: TBD

In its absence, the Technical authority is:

Name: TBD  
Title: TBD  
Organization: TBD

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Address: TBD  
Telephone: TBD  
Facsimile: TBD  
E-mail address: TBD

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

### 7.5.3 Inspection Authority

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 at Annex A 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. Any communication with a Contractor regarding the quality of the Work performed pursuant to this Contract shall be undertaken by official correspondence through the Contracting Authority.

The Inspection Authority may designate, and be represented by, an Inspector (TI), Quality Assurance Representative (QAR) or Designated Engineering Authority (DEA).

### 7.5.4 Contractor's Representative

Contact for:	Name	Telephone	E-mail
Contracting Issues			
Technical Issues			
Invoicing Issues			

### 7.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

### 7.7 Payment

#### 7.7.1 Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)

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 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.

#### 7.7.2 Milestone Payments - Subject to holdback

1. Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract, up to **85** percent of the amount claimed and approved by Canada if:
  - a. an accurate and complete claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - b. the total amount for all milestone payments paid by Canada does not exceed **85** percent of the total amount to be paid under the Contract;
  - c. all the certificates appearing on form [PWGSC-TPSGC 1111](#) have been signed by the respective authorized representatives;
  - d. all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.
  
2. "The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all Work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted."

### 7.7.3 Schedule of Milestones

*(Values and Date to be completed at contract award)*

Milestone reference No:	SOW Ref.	Price Breakdown	Unit Price	Delivery dates /completions
DE-1	5.0/ 5.2.3	Design, drawing approval, (IACS)	\$	
CONS-1	SOW	Rotating part construction ( Above pedestal excluding boom/jibs)	\$	
CONS-2		Pedestal construction	\$	
CONS-3	SOW	Booms construction ( Inner, Intermediate Outer jibs as applicable)	\$	
CONS-4	SOW	Cabin construction – Guard railing as applicable	\$	
PA-1	6.0	Crane painting	\$	
INS-1	SOW	Ancillaries Installation - install Hoists and Rigging	\$	
	SOW	Ancillaries Installation –install loose part,	\$	
	SOW	Ancillaries Installation - install all electrical,	\$	
	SOW	Ancillaries Installation - install hydraulic system	\$	
	SOW	Ancillaries Installation – install items not covered in above	\$	
KB-1	SOW	KB crane full assembly of the crane	\$	
TEST-1	8.5	Factory Acceptance Test	\$	
TEST-2	8.7	Site Assembly Test and trials	\$	
DOC 1	8.6	Site assembly instruction	\$	
	10.2	Design drawing and reports	\$	
	10.3	Crane manual	\$	
	10.5	Maintenance manual	\$	
	10.6	Recommended spares list	\$	

	10.7	Special Purpose tool list	\$	
	10.8	Operator and safety manual	\$	
	10.9	Quick reference guide	\$	
TRAIN-1	10.10	Training manual	\$	
	10.11	Training program	\$	
CA-1	SOW	Classification societies for certification and inspections.	\$	
WA-1	11	Additional Warranty ( cost for one year additional above terms and conditions)	\$	
SHIP-1	N/A	Crane crating packaging – Shipment crates	\$	
	N/A	Crane shipping cost DDP Incoterms to destination per Article	\$	
		Crane shipping i.e Custom and duties	\$	

**7.7.4 Electronic Payment of Invoices – Contract**

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);

**7.7.5 Discretionary Audit - Commercial Goods and/or Services**

The Contractor's certification that the price or rate is not in excess of the lowest price or rate charged anyone else, including the Contractor's most favoured customer, for the like quality and quantity of the goods, services or both, is subject to verification by government audit, at the discretion of Canada, before or after payment is made to the Contractor.

If the audit demonstrates that the certification is in error after payment is made to the Contractor, the Contractor must, at the discretion of Canada, make repayment to Canada in the amount found to be in excess of the lowest price or rate or authorize the retention by Canada of that amount by way of deduction from any sum of money that may be due or payable to the Contractor pursuant to the Contract.

If the audit demonstrates that the certification is in error before payment is made, the Contractor agrees that any pending invoice will be adjusted by Canada in accordance with the results of the audit. It is further agreed that if the Contract is still in effect at the time of the verification, the price or rate will be lowered in accordance with the results of the audit.

**7.8 Invoicing Instructions**

1. The Contractor must submit a claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress Payment.

Each claim must show:

- a. all information required on form [PWGSC-TPSGC 1111](#);

- b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
  - c. a list of all expenses;
  - d. expenditures plus pro-rated profit or fee;
  - e. the description and value of the milestone claimed as detailed in the Contract.
2. Applicable Taxes, must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.
3. The Contractor must prepare and certify one original and two (2) copies of the claim on form [PWGSC-TPSGC 1111](#), and forward it to the Technical Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place. The Technical Authority will then forward the original and two (2) copies of the claim to the Contracting Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.
4. The Contractor must not submit claims until all work identified in the claim is completed.

#### **7.8.1 Invoice is to be made out to:**

**To be determined**

#### **7.8.2 SACC Manual Clauses**

H4500C (2010-01-11) Lien - Section 427 of the Bank Act

#### **7.9 Certifications and Additional Information**

##### **7.9.1 Compliance**

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

##### **7.9.2 Federal Contractors Program for Employment Equity - Default by the Contractor**

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

##### **7.10 Applicable Laws**

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

##### **7.11 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 4006 ( 2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information;
- (c) the general conditions 2030 (2018-06-21), General Conditions - Higher Complexity - Goods and 1031-2 (2012-07-16), Contracting Cost Principles;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Insurance Requirements;
- (g) the Contractor's bid dated \_\_\_\_\_, as clarified on \_\_\_\_\_ " **or** ",as amended on \_\_\_\_\_ "

#### **7.12 Defence Contract**

SACC Manual clause [A9006C](#) (2012-07-16) Defence Contract

#### **7.13 Foreign Nationals (Canadian Contractor OR Foreign Contractor)**

SACC Manual clause [A2000C](#) (2006-06-16) Foreign Nationals (Canadian Contractor)

**OR**

SACC Manual clause [A2001C](#) (2006-06-16) Foreign Nationals (Foreign Contractor)

#### **7.14 Insurance – Requirements**

The Contractor must comply with the insurance requirements specified in Annex E. 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. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

#### **7.15 Procedures for Design Change or Additional Work**

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

#### **7.16 Welding Certification – Contract (If applicable)**

1. 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. a. CSA W47.1:19, Certification of Companies for Fusion Welding of Steel (Minimum Division Level 1 or 2); or
  - b. Certification by an International Institute of Welding (IIW) Authorized National Body for Company Certification (ANBCC) to ISO Standard 3834 – 1 or 2.

2. In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.
3. Before the commencement of any fabrication work, and upon request from the Inspection Authority or designate, 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.

#### **7.17 Sub-contracts and Sub-contractor List**

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

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

#### **7.18 Travel and Living Expenses - No allowance for profit and overhead**

The Contractor will be reimbursed for the authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, in accordance with Contract Cost Principles 1031-2, with no allowance for profit and/or administrative overhead. All payments are subject to government audit.

#### **7.19 SACC manual clauses**

D2000C	(2007-11-30)	Marking;
D2001C	(2007-11-30)	Labelling;
D2025C	(2017-08-17)	Wood Packaging Material;
D3015C	(2014-09-25)	Dangerous Goods / Hazardous Products - Labelling and Packaging Compliance
D9002C	(2007-11-30)	Incomplete assemblies
B1501C	(2018-06-21)	Electrical equipment

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F1782-19C020/A  
Client Ref. No. - N° de réf. du client  
F1782-19C020/A

Amd. No. - N° de la modif.  
File No. - N° du dossier  
XLV-9-42175

Buyer ID - Id de l'acheteur  
XLV176  
CCC No./N° CCC - FMS No./N° VME

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**ANNEX - A – STATEMENT OF WORK**

**DEPARTMENT OF FISHERIES AND OCEANS**

**ANNEX A - REQUIREMENT**

**Statement of Requirements for one (1)  
20 TONNE SWL OFFSHORE KNUCKLE BOOM CRANE  
Applicable to the CCGS Sir Wilfred Grenfell  
Requisition number F1782-19C020**

**23 December 2019, Revision 0**

**Prepared by:  
Marine Engineering/Integrated Technical Services  
Western Region**

Solicitation No. - N° de l'invitation  
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## **DOCUMENT CONTROL**

### **Record of Amendments**

<b>Rev</b>	<b>Date</b>	<b>Description</b>	<b>Initials</b>
<b>A</b>	10 Oct 2019	Initial draft	GDA
<b>B</b>	8 Nov 2019	Team commentary included	GDA
<b>C</b>	22 Nov 2019	Sent for translation	GDA
<b>0</b>	23 Dec 2019	Solicitation	GDA

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## **20 TONNE SWL OFFSHORE KNUCKLE BOOM CRANE**

### **1. OVERVIEW**

#### **1.1. REQUIREMENT**

- 1.1.1. The Contractor must design, fabricate and deliver to the Canadian Coast Guard one (1) self-contained offshore knuckle boom crane, rated for at least 20.0 tonnes safe working load at a radius of not less than 9.0 metres in sea state 3, and as further detailed herein.
- 1.1.2. The Contractor must deliver the completed crane to a selected Repair Facility (RF) in British Columbia, together with all necessary assembly instructions, test and trials procedures and provide on-site support at the RF, and as further detailed herein.
- 1.1.3. The crane will be installed on board the CCGS Sir Wilfred Grenfell by a separate contractor while the ship is under refit at an RF in British Columbia.

#### **1.2. CONSTRAINTS**

- 1.2.1. The crane must be configured as a self-contained electro-hydraulic unit. All electrical and mechanical components must be mounted above the slewing ring, within the integral machinery house and/or mounted within the pedestal base. No components may be mounted externally from the crane excepting for the electrical supply cabling and communication cabling.
- 1.2.2. Ship's power supply available to the crane will be 440 volt 3 phase. The Contractor must specify the required amperage and minimum cable sizes.
- 1.2.3. The ship structure provides for a specific foundation configuration which the Contractor must comply with in the design of the crane pedestal base. Details are provided at [2.2.5 through 2.2.7] and on references [Ref 1 & 2].
- 1.2.4. Connection cabinets for the shipboard electrical supply cabling and communication cabling must be included and located within the pedestal base. The shipboard cables will be supplied and terminated by a separate contractor.
- 1.2.5. The maximum weight of the completed crane in operating condition must not be greater than 70.0 tonnes.
- 1.2.6. Additional constraints and limits are detailed herein.

#### **1.3. SCOPE OF SUPPLY**

- 1.3.1. The scope of work is summarized at, and an example Schedule of Deliverables is given at, Appendix A.
- 1.3.2. The Contractor must provide their Schedule of Deliverables which indicates how they will deliver all of the Work. This schedule must identify the entire scope of Work including documentation, which the Contractor must provide under the Contract. This schedule must include, as a minimum, SOR references and other key information and the planned shipping dates.

#### **1.4. OPTIONAL ADDITIONAL REQUIREMENT**

1.4.1. The optional requirement for one (1) or two (2) additional cranes is defined in the Contract.

## **1.5. SCHEDULE**

1.5.1. Delivery to the selected RF in British Columbia is requested to be by **30 October 2020**, however the required delivery date of the completed crane, ready for installation at the RF, is detailed in the Contract.

1.5.2. The Contractor must provide their Production Schedule which indicates the planned work periods and completion dates for the entire scope of work, broken down by major components and tasks. The schedule must also indicate references such as the planned factory acceptance trials dates and the shipping and delivery dates, broken down by major components, which will comply with the contract schedule.

## **1.6. CLASS CERTIFICATION & REGULATORY COMPLIANCE**

1.6.1. The crane must be designed and constructed in accordance with and certified by one of the IACS members which are recognised by TCMSS, see [5.1].

1.6.2. The crane must be inspected for compliance with TCMSS rules and regulations by ABS, see [5.2].

## **1.7. CORRESPONDENCE**

1.7.1. Copies of any and all correspondence between the Contractor and their selected Classification Society (IACS), applicable to the design, construction, testing, trialing and certification of the crane, must be provided to the Technical Authority within 7 days of its creation or receipt.

1.7.2. Copies of any and all correspondence between the Contractor and ABS (when acting on behalf of TCMSS), applicable to regulatory compliance of the crane, must be provided to the Technical Authority within 7 days of its creation or receipt.

1.7.3. Copies of any and all completed test and trial reports must be provided to the Technical Authority within 7 days of its creation or receipt.

## **1.8. INTERPRETATION**

1.8.1. The words "must" or "shall" or "required" or "mandatory", wherever they appear in this Statement of Requirements (SOR) or referenced regulations, specifications standards or codes are to be interpreted as obligations on the Contractor in the performance of the Work within the Contract Price.

1.8.2. In the event that there is a discrepancy in requirement between this SOR and other referenced regulations, specifications, standards or codes, then the higher standard shall apply.

1.8.3. References given in rectangular brackets such as [7.3.2] refer to section, subsection and paragraph numbers within this SOR. This SOR has been prepared to accompany a Request for Proposal (RFP), therefore the words "may", "preferred" or "requested" are used herein to indicate to the Bidders, non-mandatory elements which the Bidder may wish to consider and propose when preparing their response to the RFP. Such proposals, if accepted by the Crown, will be incorporated into the Contract and therefore would become mandatory.

1.8.4. The International System of Units (SI) is used throughout this document.

## 1.9. SHIP'S PARTICULARS

LENGTH OVERALL 68.41m  
 LENGTH BETWEEN PERPENDICULARS 59.4 m  
 BREADTH (moulded) 15.0 m  
 DEPTH (to main deck) 7.25 m  
 DRAFT 5.75 m  
 DISPLACEMENT (maximum) 3560 t  
 FRAME SPACING 600 mm

## 1.10. ABBREVIATIONS & DEFINITIONS

AC Alternating Current  
 AOPS Automatic overload protection system  
 ASTM American Society for Testing and Materials  
 CA Contracting Authority (as defined by the Contract)  
 CFM Contractor Furnished Material  
 CSA Canada Shipping Act (2001)  
 CSA Canadian Standards Association  
 DC Direct Current  
 GSM Government Supplied Material  
 IAW In accordance with  
 IWO In way of  
 IACS International Association of Classification Societies  
 Inspector Inspection Authority or Inspector (as defined by the Contract)  
 ISO International Organization for Standardization  
 MOHS Maritime Occupational Health and Safety Regulations (SOR 2010/120)  
 RF Repair Facility  
 RFP Request for Proposal  
 Rules Classification Rules, Standards and Codes of one of the IACS members  
 TA Technical Authority (as defined by the Contract)  
 TCMSS Transport Canada Marine Safety and Security  
 SOR Statement of Requirements  
 SWL Safe Working Load or Working Load Limit (WLL)  
 WBS Work Breakdown Structure  
 WMO World Meteorological Organization

## 1.11. REFERENCE DOCUMENTS

No.	TITLE	Document or Dwg. No.
1	Canada Shipping Act (2001)	
2	Load Line Regulations	SOR/2007-99
3	Maritime Occupational Health and Safety Regulations	SOR 2010-120
4	Cargo, Fumigation and Tackle Regulations	SOR/2007-128

5	Standard Practice for Human Engineering Design for Marine Systems, Equipment and Facilities	ASTM F1166-07
6	Certification of Companies for Fusion Welding of Steel	CSA W47.1:09 (R2019)
7	Welding Inspector Certification	CSA W178.2
8	General Strip-Out Guidance Plan	S37/2020/H001
9	General Re-Arrangement Guidance Plan	S37/2020/H-002
10	Proposed Crane Foundation Plan	(Pending)
11	Sectional Video Clip33	
12	INTERSPEC – Crane - CCGS SWG 21 08 2019 rev1.pdf	
13		
CCG/ME standard drawing formats may be downloaded from:		
14	<a href="ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEAutoCadTemplateAndUserGuideRev0.docx">ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEAutoCadTemplateAndUserGuideRev0.docx</a>	
15	<a href="ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEImperialTemplateRev2.dwt">ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEImperialTemplateRev2.dwt</a>	
16	<a href="ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEMetricTemplateRev2.dwt">ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEMetricTemplateRev2.dwt</a>	
17	<a href="ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEPlotStyle.ctb">ftp://ftp.dfo-mpo.gc.ca/campbellc/someCCGStandards/drafting(new)/CCG-MEPlotStyle.ctb</a>	

## 2. GENERAL DESCRIPTION

### 2.1. DEPLOYMENT

The crane will be the primary operational equipment of the CCGS Sir Wilfred Grenfell, in her role as a buoy tender as well as for her other DFO/CCG program activities. Therefore, the crane must be robust, reliable and flexible, and designed to be capable of accomplishing the following operations for not less than 20 years:

- 2.1.1. Deploying and retrieving various navigation and scientific buoys, anchors or moorings, and chain in a variety of conditions up to sea state 5;
- 2.1.2. Positioning deck loads over the entire working deck;
- 2.1.3. Launching and retrieving unmanned vessels from the boat deck;
- 2.1.4. Discharging cargo from ship to manned lightering vessel at sea;
- 2.1.5. Loading and discharging stores, cargo and equipment from ship to shore;

- 2.1.6. Performing a man lift while at sea or in harbour; and,
- 2.1.7. Plumbing over the main deck cargo hatch and the engine room access hatch.

## **2.2. PHYSICAL DESCRIPTION**

- 2.2.1. The crane must be a pedestal mounted, slewing, knuckle boom crane. The pedestal must be of sufficient height that the activities described above can be achieved. The pedestal, machinery, operator's cabin, main and jib booms must be enclosed and weather tight such that the potential for corrosion or other degradation is minimized.
- 2.2.2. The machinery and all fixed equipment must be self contained, mounted above the slewing ring within a weather protected machinery house and/or within the pedestal. The operator's cabin must be side mounted above the slewing ring and designed such that the operator's view is not restricted. Port side when facing aft is the preferred location for the operator's cabin.
- 2.2.3. An access ladder must be provided complete with applicable safety railings and decking to accommodate safe entry into the operator's cabin. Decking must be non-skid.
- 2.2.4. In order to achieve the required hook heights and load radii it is anticipated that the main boom will be mounted about 3 m above the slewing ring and will be about 13 m long and that the jib boom will be about 9 m long. Exact dimensions must be determined by the Contractor such that the full intent of this SOR is achieved.
- 2.2.5. In order to achieve the required range of operating radii, hook heights and clearance for both deck equipment and personnel working on the Boat Deck, it is anticipated that the pedestal will be at least 1100 mm tall; however, the Contractor must allow for a pedestal height of not less than 1600 mm in their design. The final height must be approved by the TA prior to commencement of fabrication of the pedestal.
- 2.2.6. The Contractor must propose a cylindrical pedestal which complies with reference drawing [Ref 2]; therefore the finished outside diameter of the pedestal is preferred to be 2616 mm, however a range of + 350 to - 150 mm on the outside diameter will be acceptable. The pedestal will be welded to the foundation plate by the RF to specifications which the Contractor must approve.
- 2.2.7. The foundation plate will be provided and installed on the new Boat Deck by the RF, to specifications which the Contractor must approve. It is estimated that the finished height of the foundation plate will be at 2875 mm above the main deck.
- 2.2.8. The normal operating zone of the crane is from outboard, both port and starboard, to aft; however the stowed position will be forward, landed on a crutch. Therefore, the slewing capability of the crane must be 360 degrees continuous.
- 2.2.9. The boom will be stowed on a crutch to be mounted on a new deck house which will be installed on the Boat Deck forward of the crane. The Contractor must provide a suitable fabricated steel boom crutch, lined with replaceable UHMW polyethylene pads, to be weld-mounted to the house works by the RF.
- 2.2.10. When in the stowed position, with the boom forward in the crutch, the main hook block must be clear of the Boat Deck and the upper most component of the crane, including its booms, must be not more than 7.5 metres above the Boat Deck, such that views from the aft bridge will not be obscured.

2.2.11. Lashing eyes, to secure the main hook to the boat deck when in the stowed position, will be supplied and fitted by others.

### **2.3. ARRANGEMENT OF HOISTS**

2.3.1. The crane must be fitted with 3 hoists.

2.3.2. The main hoist "A" must be lead to the extreme end of the jib-boom on centerline.

2.3.3. The auxiliary hoist "B" must be lead on the side (typically to port when facing aft) of the jib boom, at least 400 mm off centerline but need not be greater than 800 mm off centerline. The lead point must be set in from the end of the jib-boom a distance of 1.5 to 2.5 metres such that its rigging will not foul the main hoist.

2.3.4. The auxiliary hoist "C" must be lead on the opposite side of hoist "B", at least 400 mm off centerline but need not be greater than 800 mm off centerline. The lead point must be set in from the end of the jib-boom a similar distance to hoist "B".

## **3. ENVIRONMENTAL CONDITIONS**

### **3.1. PRIMARY RATING CONDITIONS**

3.1.1. The following environmental conditions must be applicable in the primary offshore ratings for the crane:

3.1.1.1. Lowest/highest mean daily air temperatures: -20oC to + 35oC;

3.1.1.2. Significant wave heights up to 1.25 meters, WMO sea state 3; and,

3.1.1.3. Wind speeds of up to 27 knots.

### **3.2. SECONDARY RATING CONDITIONS**

3.2.1. The following environmental conditions must be applicable in the secondary harbor/sheltered water ratings for the crane:

3.2.1.1. Lowest/highest mean daily air temperatures: -20oC to + 35oC;

3.2.1.2. Significant wave heights up to 0.5 meters, WMO sea state 2; and,

3.2.1.3. Wind speeds of up to 16 knots.

### **3.3. WORST OPERATING CONDITIONS**

3.3.1. The crane must be capable of operating day or night, at reduced load ratings to be determined by the Contractor, in the following environmental conditions:

3.3.1.1. Lowest/highest mean daily air temperatures: -20oC to + 35oC;

3.3.1.2. Significant wave heights up to 2.5 meters (WMO sea state 4) with wind speeds of up to 33 knots; and,

3.3.1.3. Significant wave heights up to 4.0 meters (WMO sea state 5) with wind speeds of up to 40 knots.

### **3.4. STOWED CONDITIONS**

3.4.1. The crane must be designed to withstand the following environmental conditions when secured in stowed position:

3.4.1.1. Lowest/highest mean daily air temperatures: -20oC to + 35oC;

3.4.1.2. Significant wave heights up to 9.0 meters; and,

3.4.1.3. Wind speeds up to 100 knots.

---

## **4. LOAD RATINGS & PERFORMANCE**

### **4.1. LOAD RATINGS & MARKINGS**

- 4.1.1. All safe working load ratings must be based on net available capacity after allowances for the weight of hoist cables and hook blocks.
- 4.1.2. All hoists must to be dual rated. The Contractor must prominently mark both ratings for each hoist on the booms of the crane. Such markings must be clearly legible from the main deck.
- 4.1.3. Load-radius charts must be provided for all three (3) of the hoists in each of the conditions and sea states noted below and as applicable to lifting personnel.

### **4.2. MAIN HOIST "A", PRIMARY RATINGS**

- 4.2.1. The Safe Working Load rating (SWL) for the main hoist "A", when rated at sea state 3 IAW the environmental conditions stated at [3.1], must be not less than 20.0 tonnes at a radius of at least 9.0 metres and not less than 9.0 tonnes at a radius of 20.0 metres. The maximum SWL ratings, in sea state 3, need not exceed 20 tonnes at 10 metres and 10 tonnes at 20 metres.
- 4.2.2. The minimum operating radius for the main hoist must be not greater than 4.1 metres but need not be less than 3.7 metres. The minimum SWL at this radius, when rated at sea state 3, must be not less than 15.0 tonnes.
- 4.2.3. The SWL ratings at intermediate operating radii, in sea state 3, must be based on the maximum available load moment, but must be not less than 180 tonne x metres.
- 4.2.4. This hoist must be capable of proportionally controlled hook speeds of between 0 to 20 m/min for the maximum loads in sea state 3 and between 0 to 40 m/min when unloaded.

### **4.3. AUXILIARY HOIST "B", PRIMARY RATINGS**

- 4.3.1. The Safe Working Load rating (SWL) for the auxiliary hoist "B", when rated at sea state 3 IAW the environmental conditions stated at [3.1], must be not less than 7.5 tonnes but need not exceed 9.0 tonnes, throughout its full operating radii.
- 4.3.2. The maximum operating radius must be not less than 17.5 metres but need not exceed 18.5 metres.  
The minimum operating radius must be not greater than 4.1 metres but need not be less than 3.7 metres.
- 4.3.3. This hoist must be capable of proportionally controlled hook speeds of between 0 to 30 m/min for the maximum loads in sea state 3 and between 0 to 60 m/min when unloaded.

### **4.4. AUXILIARY HOIST "C", PRIMARY RATINGS**

- 4.4.1. The Safe Working Load rating (SWL) for the auxiliary hoist "C", when rated at sea state 3 IAW the environmental conditions stated at [3.1], must be not less than 5.0 tonnes but need not exceed 7.5 tonnes, throughout its full operating radii.
- 4.4.2. The maximum operating radius must be not less than 17.0 metres but need not exceed 18.5 metres.

The minimum operating radius must be not greater than 4.1 metres but need not be less than 3.7 metres.

- 4.4.3. This hoist must be capable of proportionally controlled hook speeds of between 0 to 40 m/min for the maximum loads in sea state 3 and between 0 to 70 m/min when unloaded.

#### **4.5. SECONDARY RATINGS**

- 4.5.1. The Contractor must determine the maximum available Harbour/Sheltered Waters SWL ratings for each of the hoists, subject to the primary ratings noted above, based on the environmental conditions stated at [3.2].
- 4.5.2. The Contractor must also determine the available SWL ratings for each of the hoists when operating in sea states 4 and 5, subject to the primary ratings noted above, based on the environmental conditions stated at [3.3].
- 4.5.3. Additionally, the crane must be rated for lifting personnel. There are two (2) typical personnel lifts which must be provided for:
- I. Rescue basket/personnel load of 1000 kg; and,
  - II. Rescue boat load of 3800 kg.

All hoists must be rated for personnel lifting. The Contractor must provide SWL ratings for Hoists "B" and "C" in up to SS 3 and for Hoist "A" in up to sea state 5.

#### **4.6. LIST, TRIM & LEAD ANGLES**

- 4.6.1. Harbour/sheltered water ratings must allow for the following list, trim and lead angles:
- 4.6.1.1. Ship's list: 5 degrees;
  - 4.6.1.2. Ship's trim: 2 degrees;
  - 4.6.1.3. Off lead angle: 5 degrees; and,
  - 4.6.1.4. Side lead angle: 2 degrees.
- 4.6.2. All offshore ratings must allow for the following list, trim and lead angles:
- 4.6.2.1. Ship's list: 10 degrees;
  - 4.6.2.2. Ship's trim: 5 degrees;
  - 4.6.2.3. Off lead angle: 10 degrees; and,
  - 4.6.2.4. Side lead angle: 10 degrees.

#### **4.7. AHC & CT HOISTS**

- 4.7.1. Active Heave Compensation (AHC) system is not required.
- 4.7.2. Constant Tension (CT) system is not required.

#### **4.8. SLEWING**

- 4.8.1. The crane must be capable of 360 degree continuous slewing.
- 4.8.2. Slewing speed must be proportionally controllable between 0 to at least 180 degrees per minute when fully loaded and between 0 to 360 degrees per minute when unloaded.

#### **4.9. LUFFING**

- 4.9.1. Luffing speed must be proportionally controllable between zero and maximum speed.

- 4.9.2. Luffing from maximum to minimum radius must be achievable in not more than 60 seconds when loaded with 9.0 tonnes.
- 4.9.3. Luffing from 12.0 metre radius to 7.0 metre radius must be achievable in not more than 40 seconds when loaded with 15.0 tonnes.

#### **4.10. COMBINED RATINGS**

- 4.10.1. The crane must be designed such that any two of hoists "A", "B" & "C" will be capable of being deployed simultaneously, however the maximum load rating of any combined load need not exceed the rated load of hoist "A".
- 4.10.2. The crane must be capable of simultaneous four-motion operations at full lifting capacity, however reduced speeds will be acceptable, for the following motion combinations:
  - 4.10.2.1. Main hoist, auxiliary hoist, luffing and slewing; or,
  - 4.10.2.2. Both auxiliary hoists, luffing and slewing.
- 4.10.3. Acceptable speeds for 2, 3 or 4 motion combinations are:
  - 4.10.3.1. At least 95% of the rated speeds for any two simultaneous motions;
  - 4.10.3.2. At least 90% of the rated speeds for any three simultaneous motions; and
  - 4.10.3.3. At least 85% of the rated speeds for four simultaneous motions.

### **5. DESIGN, CERTIFICATION & CONSTRUCTION**

#### **5.1. CLASS CERTIFICATION**

- 5.1.1. The crane and all associated equipment, including the pedestal and installation, must be designed, constructed, tested and trialed, inspected and certified in accordance with the *Rules* of one of the International Association of Classification Societies (IACS) members who are recognized by Transport Canada Marine Safety and Security, as follows:
  - 5.1.1.1. American Bureau of Shipping;
  - 5.1.1.2. Bureau Veritas;
  - 5.1.1.3. Class NK;
  - 5.1.1.4. DNV GL;
  - 5.1.1.5. Korean registry;
  - 5.1.1.6. Lloyd's Register; or,
  - 5.1.1.7. RINA Services, SpA.
- 5.1.2. Compliance with the *Rules* of either of the above Recognized Organizations (RO) is acceptable, provided that all of the applicable *Rules* are complied with, and that certification is provided by the selected RO. The Contractor must not commence fabrication prior to approval of the drawings by the selected RO.
- 5.1.3. The Contractor must be responsible for all fees applicable to Class Certification.

#### **5.2. REGULATORY COMPLIANCE**

- 5.2.1. The crane and all associated equipment must comply with the Canada Shipping Act (2001), the Cargo, Fumigation and Tackle Regulations (SOR/2007-128), the Maritime Occupational Health and Safety Regulations (SOR 2010/120) and any other applicable regulations, codes and standards.

- 5.2.2. The American Bureau of Shipping (ABS) have been selected under the Delegated Ship Inspection Program (DSIP) to inspect the CCGS Sir Wilfred Grenfell on behalf of Transport Canada Marine Safety and Security (TCMSS).
- 5.2.3. The Contractor must provide all necessary design drawings and calculations, as well as access to the work site(s), for ABS to inspect and approve the crane and all of its associated equipment for compliance with all applicable law, regulations, codes and standards on behalf of TCMSS. The Contractor must not commence fabrication prior to approval of the drawings by ABS on behalf of TCMSS.
- 5.2.4. The Contractor must schedule each required regulatory inspection with ABS.
- 5.2.5. The Contractor must be responsible for all fees applicable to regulatory inspection by ABS.

### **5.3. INSPECTION BY CANADA**

- 5.3.1. The Contractor must provide all necessary design drawings and calculations to the Technical Authority (TA), as defined in the Contract. The Contractor must not commence fabrication prior to approval of the drawings by the TA, on behalf of Canada.
- 5.3.2. The Work, including all tests and trials, will be subject to inspection by the Inspection Authority or an appointed Inspector, as defined in the Contract. The Contractor must provide access to the work site(s) and any necessary support, for the Inspector to inspect and approve the Work on behalf of Canada.
- 5.3.3. The Contractor must notify the Inspector at least 14 days ahead of any classification or regulatory inspection to be conducted at the factory.
- 5.3.4. The Contractor must notify the Inspector at least 48 hours ahead of any classification or regulatory inspection to be conducted on board the vessel.

### **5.4. COMPONENTS AND EQUIPMENT SUPPORT**

- 5.4.1. When selecting components for the Crane design, preference must be given to Commercial Off The Shelf (COTS) industrial grade components. In the absence of suitable COTS, industrial grade components must be selected and customized, or specially designed, to meet the environmental requirements at section [3].
- 5.4.2. All structural components and all mechanical, electrical and electronic, as well as other auxiliary equipment, must be supportable by parts and service in Canada, within 30 days.
- 5.4.3. The Contractor must ensure that the Crane, including all of its equipment and components, does not include parts, including spare parts, that have become obsolete or are expected to become obsolete within fifteen (15) years after the Crane has been delivered and accepted by Canada.

### **5.5. STRUCTURAL DESIGN**

- 5.5.1. The crane, including all major structural components of the boom, jib-boom, house works and pedestal must be of modern design and of all welded structure.
- 5.5.2. The crane must be fitted with attachment points for a fall arrest system at elevated areas of the structure that will require access by personnel for inspections, maintenance or repairs.

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## **5.6. WELDING CERTIFICATION & STANDARDS**

5.6.1. The Contractor and sub-contractors performing the welding must meet one of the following requirements for qualification of welding procedures and welding personnel, including welding supervisors, welders and tack welders, either:

- 5.6.1.1. Certification by the Canadian Welding Bureau (CWB) to CSA Standard W47.1:19, Division 1 or 2; or,
- 5.6.1.2. Certification by an International Institute of Welding (IIW) Authorized National Body for Company Certification (ANBCC) to ISO Standard 3834 – 1 or 2.

The Contractor must submit, for approval by the TA, evidence which clearly demonstrates that one of the standards of welding certification listed above are being met.

- 5.6.2. The Contractor must employ or retain a qualified welding engineer responsible for welding design, welding procedures, practices and techniques, and workmanship.
- 5.6.3. Welding must comply with the requirements of CSA Standard W59:18 with specific attention being given to the requirements of Clause 12 of CSA W59:18. The Contractor must submit the welding standards and procedures which they will comply with respecting structural fabrication of the crane, for approval by the TA.
- 5.6.4. All welds must be inspected 100% of their length by Visual and Magnetic Particle Examination methods. Complete joint penetration welds in butt, tee and corner joints must be inspected 100% of their length by ultrasonic examination as well as the visual and magnetic particle examination requirements detailed herein. The acceptance criterion for completed welds must be in accordance with the requirements for cyclically-loaded structures within CSA Standard W59:18.
- 5.6.5. Visual examinations must be conducted by an independent 3rd party. All personnel performing visual weld inspections must be certified by one of the following:
  - 5.6.5.1. CSA W178.2:18, Level 2 or 3; or,
  - 5.6.5.2. AWS QC1, Level 2 or 3.
- 5.6.6. Magnetic particle and ultrasonic examinations must be conducted by an independent 3rd party. All personnel performing magnetic particle and ultrasonic weld inspections must be certified by one of the following:
  - 5.6.6.1. CGSB 48.9712-2014, Level 2 or 3; or,
  - 5.6.6.2. ISO 9712-2012, Level 2 or 3.
- 5.6.7. Nondestructive examination procedures and techniques must meet the requirements of CSA Standard W59:18.
- 5.6.8. All nondestructive inspections are to be performed following written procedures approved by a Level 3 inspector certified in the appropriate inspection method.

## **5.7. MECHANICAL DESIGN**

- 5.7.1. The crane's sub-components mounted in hard to access areas must be arranged such that the maintenance components are accessible and visible for maintenance, adjustment or repair.

5.7.2. The crane must be fitted with centralized grease points to reduce the need to physically access the entire crane structure, complete with stainless steel tubing and grease fittings.

5.7.3. All winches must consist of a grooved rope drum with integrated planetary gear, hydraulic motor and fail safe brakes. Winch drum capacities must be such that at least three dead turns are guaranteed under any designed operating conditions.

## **5.8. ELECTRO-HYDRAULIC DESIGN**

5.8.1. The Crane must be designed with two identical electro-hydraulic power packs to achieve the SWL ratings and performance characteristics stated at section [4].

5.8.2. For shore power, or for reduced shipboards loading, either power pack must individually be capable of operating the crane to the full lifting capacities (SWL) stated at section [4], however the following reduced speeds of operation will be acceptable when operating on one power pack only:

5.8.2.1. At least 85% of the rated speed for each individual motion;

5.8.2.2. At least 75% of the rated speeds for any two simultaneous motions;

5.8.2.3. At least 65% of the rated speeds for any three simultaneous motions; and

5.8.2.4. At least 50% of the rated speeds for four simultaneous motions.

5.8.3. The electric motors must be marine three (3) phase squirrel cage type with Class F insulation, IP 54 enclosures, IC411 cooling capable of operating in ambient temperature of 40°C, fitted with automatically controlled anti-condensation heaters and soft start controls.

5.8.4. The power packs must conform to the Design Specifications required of Hydraulic Power Oil Systems in the Marine Machinery Regulations, current edition. Accessibility and service routes must be provided for all hydraulic pumps and components.

5.8.5. The power packs must be equipped with local indications and alarms for the following parameters as a minimum:

5.8.5.1. Crane main motor run indication;

5.8.5.2. Hydraulic tank low level alarm;

5.8.5.3. Hydraulic tank low, low level crane shut down switch;

5.8.5.4. Oil temperature indication for tank and system oil return line, high temperature alarm;

5.8.5.5. System main oil pressure indication, low pressure alarm; and

5.8.5.6. Hour meters for each power pack.

5.8.6. The crane must be fitted with a minimum of four (4) marine grade, waterproof LED light fixtures providing a minimum of 20,000 lumen, with two (2) on the boom and two (2) below the operator's cabin. The boom lights must be fitted on swivels to ensure the lights are facing downwards at all angles of crane operation. Each pair of lights must be able to be operated separately from the crane operator's cabin. The Contractor must submit details of the proposed lighting for approval by the TA prior to fabrication.

5.8.7. All hydraulic cylinders must be designed for marine use, and all pins and bushings must be of corrosion resistant material. The luffing cylinder rods must be 316 L stainless steel and double chrome plated. With the crane in the stowed position, a minimal area of the hydraulic rams must be exposed to the elements.

5.8.8. The crane must be supplied with stainless steel 316-L hydraulic pipes, pipe clamps, grease lines, and fittings. Hydraulic hose fittings must be JIC (SAE J514).

## **5.9. CONTROL & SAFETY SYSTEMS**

5.9.1. The control and safety systems must be approved by the selected IACS member.

5.9.2. The system must be designed for use in a marine environment and in the environmental conditions given at section [3] utilizing current production electronic components. standardized Programmable Logic Controllers (PLC) must be selected and the system designed following a "plug and play" philosophy such that PLCs may be exchanged requiring minimal adjustments.

5.9.3. The software operating system must be based on an up to date industry standard having, as a minimum, the following capabilities:

5.9.3.1. Must be capable of performing diagnostics to detect, identify, locate and indicate to the operator/maintainer any fault that has occurred in the control system, including control hardware and sensors;

5.9.3.2. Diagnostic messages/indications must be presented in clear language and graphically presented on the user interface display screen with suitable colour coding for rapid identification of faulty components; and,

5.9.3.3. Must be capable of supplying alarm signals and other key information to the vessel's Alarm and Monitoring System.

5.9.4. The system must provide a data logging system with a capacity to meet the following requirements:

5.9.4.1.1. Data logging for a minimum of 3 months including all alarms, warnings, errors and diagnostics results;

5.9.4.1.2. Capability to view time stamped historical data both digitally and graphically;

5.9.4.1.3. Ability for the ship's crew to transfer the logged data for offline analysis; and,

5.9.4.1.4. Capability of supplying alarm signals and other key information to the vessel's Alarm and Monitoring System.

5.9.5. The crane must be designed with the following safety features:

5.9.5.1. Load and Moment Indication system for the main and auxiliary hoists, including:

5.9.5.1.1. Digital readout of loads on all hoists in tonnes;

5.9.5.1.2. Digital readout of boom moment in % maximum;

5.9.5.1.3. A 90% load and/or moment audible and visual warning; and,

5.9.5.1.4. An overload audible and visual alarm;

5.9.5.2. Automatic Overload Protection Systems and Manual Overload Protection Systems in accordance with Class rules;

5.9.5.3. Emergency load lowering system (rope release);

5.9.5.4. Anti-two block control on all winches;

5.9.5.5. Fail safe brakes for the winches and slewing motors;

5.9.5.6. Load holding valves for the luffing cylinders, winch motors, and slewing motors to prevent crane movement in the case of hose rupture or other failure causing a pressure drop in the system;

5.9.5.7. Slewing sensors which set turn limits in connection with the boom luffing position, such that collision between the boom and the forward superstructure or Search and Rescue boat or its davit will be avoided.

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- 5.9.5.8. Outputs for the ship's alarm and monitoring of the following parameters:
- 5.9.5.8.1. Crane main motor run indication;
  - 5.9.5.8.2. Hydraulic tank low and low, low level alarms;
  - 5.9.5.8.3. Oil temperature indication for tank and system oil return line; and
  - 5.9.5.8.4. System main oil pressure and pilot pressure indications.
- 5.9.6. The Crane must be operable from the main control station in the Operator's Cabin and by a remote control belly pack. Both control units must be fitted with a "take control" button such that only one controller can have control of the crane at any one time. There must be dedicated "in control" indicator lights at each station.
- 5.9.7. The Main Control Station in the Operator's Cabin must include all of the crane function controls, alarms (etc.) which are identified above and a colour monitor which incorporates the following design elements:
- 5.9.7.1. Automatic contrast adjustment (sunlight visible);
  - 5.9.7.2. Self- diagnostic capability including maintenance software;
  - 5.9.7.3. A touch screen will be preferred or the system may be provided with function buttons to allow the operator to quickly change display pages, in groupings according to function, such as:
    - 5.9.7.3.1. Operational overview page – loads, trim, list, wind, status of safety systems, etc.;
    - 5.9.7.3.2. System status page(s) – pressures, temperature readings;
    - 5.9.7.3.3. Maintenance information page (hour meters, etc.);
    - 5.9.7.3.4. Configuration of set points, alarms and anti-collision settings; and,
    - 5.9.7.3.5. Alarms, faults and warning listing page.
- 5.9.8. The Remote Control (belly pack) Station must include all of the crane function controls and alarm indicators.
- 5.9.9. If a radio remote control is proposed for the belly pack then it must meet the *Rules* of the selected IACS member and the environmental conditions given at section [3], and must include the following features:
- 5.9.9.1. Safeguard against the unintended activation of the crane or hoist;
  - 5.9.9.2. Error checking to prevent the controlled equipment from responding to corrupt data;
  - 5.9.9.3. Identification coding methods to prevent a transmitter other than the designated transmitter for that crane or hoist from operating the equipment;
  - 5.9.9.4. Automatic stop 1: Stop all crane and hoist functions when the power to the remote control system is removed for any reason, when under remote control;
  - 5.9.9.5. Automatic stop 2: Stop all crane and hoist motions when the control signal for any crane or hoist motion becomes ineffective; and,
  - 5.9.9.6. Emergency stop: Operator initiated stop of all crane and hoist motions, regardless of any malfunction within the remote control system and that requires resetting of the emergency stop feature before equipment operation can resume.
- 5.9.10. A key-locked override switch must be provided on the main console only which permits operation of the crane above the SWL for proof testing purposes and as an over-ride in the event of a critical PLC failure.
- 5.9.11. The Operating & Safety Manual identified at section [10.8] must be loaded on board the system and must include the following data, as a minimum:

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- 5.9.11.1. Equipment name to which a signal is connected;
  - 5.9.11.2. Signal name or ID;
  - 5.9.11.3. Connector name or ID and PIN information;
  - 5.9.11.4. Electrical signal characteristics, e.g. voltage, current, frequency, digital input/output, and analog input/output and coefficient;
  - 5.9.11.5. Field device number; and
  - 5.9.11.6. Sensor or field device data.

## **5.10. RIGGING AND LOOSE PARTS**

- 5.10.1. The Contractor must supply the crane complete with all hoist cables, sheaves, guides and load hooks for each of the 3 hoists.
- 5.10.2. All hook blocks must be:
  - 5.10.2.1. Weighted or fitted with overhauling balls such that they will freely overhaul from any operating configuration of the boom and jib-boom when the winch drum is veered; and,
  - 5.10.2.2. Fitted with load sensing devices.
- 5.10.3. All sheaves, including any sheaved blocks, must be guarded to prevent the wire rope from slipping off at maximum lead angles and all operational conditions.
- 5.10.4. The hoist cable lengths must be sufficient that the hooks will fall at least 12.0 metres below the tip of the boom, but must also be outfitted to reach the hold deck 9.0 metres below the foundation plate.
- 5.10.5. All wire ropes must be galvanized non-rotating, right regular lay, IWRC construction having a minimum breaking stress of 960 N/mm<sup>2</sup>.
- 5.10.6. Load test and material certificates must be provided for all wire and rigging components.
- 5.10.7. All hook blocks must be supplied with test certificates issued by the selected IACS member.

## **5.11. OPERATOR'S CABIN**

The Operator's Cabin (OC) must be ergonomically designed IAW [Ref 8] and provided with the following:

- 5.11.1. The OC must be weather tight.
- 5.11.2. The cabin door must be lockable, weatherproof and provided with adjustable latches/dogs/gaskets such that it is able to exert pressure on the door seal.
- 5.11.3. The OC must be provided with sufficient windows on at least 3 surfaces (ahead, left and right) of the operator's position to maximize an unobstructed view of the load and working deck areas, including:
  - 5.11.3.1. The fixed windows in front of the operator's position must have tinted safety glass that complies with the requirements of the MOHS Regulations [Ref 10] and must be fitted with motorized windshield wipers, electric defrost and window shades. The upper window must provide viewing angles sufficient to observe the highest possible elevation of the main boom. The lower window must provide viewing angles as low as is practicable.

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- 5.11.3.2. Safety bars must be mounted on the exterior of the fixed windows in front of the operator's position that complies with the requirements of the MOHS Regulations.
- 5.11.3.3. Windows on the left and right sides of the operator's position, and in the door, must have tinted safety glass that complies with the requirements of the MOHS Regulations and must be fitted with window shades. At least one of these windows must be operable.
- 5.11.4. Ergonomic operator controls for all crane movements must be provided, with the crane operator being seated in an adjustable operator's chair with suspension capable of supporting a 130 kg operator. The controls must be step-less controls from zero to maximum speed.
- 5.11.5. Controls must also include the remote start and stopping of the hydraulic power packs, signal horn and emergency release control. The controls must have the ability to select either or both power packs for operation, and if so designed, remotely cross over hydraulic connections.
- 5.11.6. Instrumentation must provide the operator with operational information from the crane safety systems (load and radius indications), system pressure and temperature indications, and hour meters and alarms for abnormal conditions, see [5.9].
- 5.11.7. The cabin must be provided with thermal and sound insulation as practicable that will meet the environmental requirements and will dampen the noise level at the operator's position to not more than 75 dB while the crane is in operation with all windows and doors closed.
- 5.11.8. All interior surfaces are to be capable of withstanding oils and solvents common to ships and are to be easy to clean. Surfaces forward of the operator must be non-reflective. Interior flooring must be non-skid surface.
- 5.11.9. The OC must be fitted with mechanical ventilation and a thermostatically controlled heater and air conditioner to maintain a temperature of 20 degrees Celsius when the outside temperature is between -5 and 35 degrees Celsius.
- 5.11.10. The OC must be provided with:
- 5.11.10.1. Internal/dimmable lighting system;
  - 5.11.10.2. At least one (1) 120 v 60 hz 15 a outlet;
  - 5.11.10.3. A telephone for connection with the ship's Internal Communication System;
  - 5.11.10.4. A loudspeaker/talkback system for communication with the working deck;
  - 5.11.10.5. Provision for mounting a permanent VHF radio; and,
  - 5.11.10.6. Portable 10 kg ABC fire extinguisher
- 5.11.11. Load radius charts for all hoists, indicating primary and secondary ratings, must be mounted in a prominent location inside the operator's cabin. Load radius charts must be etched or engraved metal or other robust non-photo sensitive material. Lettering must be easily legible, not less than 6 mm.
- 5.11.12. A copy of the Quick Reference Guide [10.8.3], which must be published on indelible/waterproof sheets, must be secured in an obvious location at the main control console.

## **6. PAINING & CORROSION PROTECTION**

- 6.1.1. The Contractor must supply the crane and all components fully painted IAW [Ref 6], or otherwise corrosion protected to the satisfaction of the TA, except as noted below.
- 6.1.2. The lowest 100 mm of the pedestal, including any attached stiffeners or other attachment points intended to be welded by the RF, must be prepared IAW [Ref 6] and coated with an approved weldable primer.

## **7. SHIPPING & DELIVERY**

- 7.1.1. Requirements for shipping and delivery are stated in the Contract; however, the Contractor must ensure that all components which may be subject to wear or damage through shipping are properly preserved, packaged and protected. Any damage or wear sustained through shipping must be corrected by the Contractor prior to assembly or installation on board the vessel.

## **8. TESTS & TRIALS**

### **8.1. GENERAL**

- 8.1.1. The Contractor must conduct their own inspections, tests and trials to verify successful completion of the Work in accordance with this SOR. All discrepancies identified through the inspection, test and trials processes must be corrected prior to delivery and acceptance.
- 8.1.2. The Contractor must prepare and submit Tests & Trials Plans, including a description of all tests and trials to be performed, which must verify the quality of the base materials, the sufficiency of the design, fabrication and assembly of the entire crane including its mechanical and electrical components, and the performance of the finished crane in accordance with all requirements of this SOR.
- 8.1.3. The Tests & Trials Plans must separately identify each test or trial to be performed, either by location or phase of construction, for example:
  - 8.1.3.1. Production Tests & Trials;
  - 8.1.3.2. Welding Certification;
  - 8.1.3.3. Factory Acceptance Trials;
  - 8.1.3.4. Site Assembly Instructions;
  - 8.1.3.5. Site Acceptance Tests & Trials; and,
  - 8.1.3.6. Sea Trials.
- 8.1.4. All tests & trials must be recorded, whether successful or if partially or completely failed. Copies of all test records must be forwarded to the Inspector within 7 days of said test or trial.

### **8.2. MATERIAL TEST CERTIFICATES**

- 8.2.1. Copies of all material test certificates (Mill Certs) must be forwarded to the Inspector within 7 days of their creation or receipt.
- 8.2.2. Mill Certs for all structural materials must be provided to the satisfaction of the Inspector prior to commencement of fabrication.

### **8.3. PRODUCTION TESTS & TRIALS**

- 8.3.1. Production tests & trials are the responsibility of the Contractor.

8.3.2. The Contractor must permit attendance at production tests & trials by any of the attending IACS Surveyor, the ABS Surveyor on behalf of TCMSS or the Inspector, if so requested.

8.3.3. Summary reports of the production test & trials must be provided to the TA.

#### **8.4. WELDING CERTIFICATION**

8.4.1. The independent 3<sup>rd</sup> party welding inspector [**Error! Reference source not found.**] must submit interim reports within 7 days of inspections, or in the case of any failure, within 24 hours of such failure.

8.4.2. The independent 3<sup>rd</sup> party welding inspector [**Error! Reference source not found.**] must submit a final report within 7 days of completion of all inspections, which must summarize all inspections, must detail any repair work conducted and re-inspected, and must include their certification that all work has been successfully completed IAW the approved standards.

#### **8.5. FACTORY ACCEPTANCE TESTS & TRIALS**

8.5.1. The Contractor must provide a Factory Acceptance Tests & Trials (FAT) Plan.

8.5.2. The Factory Acceptance Tests & Trials (FAT) Plan must identify the tests and trials which must be performed upon initial assembly of the crane in order to satisfy this SOR, and in order to support certification by the selected IACS body and TCMSS. The FAT must identify all conditions, precautions, adjustments, expected test results, tolerances, and test equipment required to verify the correct operation of the crane, including all of its associated equipment and systems, and must demonstrate the full range of operations and all capabilities of the crane.

8.5.3. The FAT Plan must be accepted by the the attending IACS Surveyor, the ABS Surveyor on behalf of TCMSS and the TA.

8.5.4. The Contractor must confirm to the TA the intended start date of the Factory Acceptance Tests at least 14 days in advance of their commencement.

8.5.5. The results of the tests & trials must be acceptable to the attending IACS Surveyor, the ABS Surveyor on behalf of TCMSS and the TA before the crane is broken down for shipment to the RF.

#### **8.6. SITE ASSEMBLY INSTRUCTIONS**

8.6.1. The Contractor must provide Site Assembly Instructions and Set-to-Work Procedures.

8.6.2. The Site Assembly Instructions must be sufficiently detailed to assure correct and efficient assembly by the RF. These instructions must include procedures for the RF to correctly uncrate and prepare for assembly, welded where necessary, assemble and mechanically adjust or align the crane within design tolerances.

8.6.3. The Set-to-Work Procedures must be sufficiently detailed such that mechanical, electrical and hydraulic components will be correctly connected, terminated and prepared for operation by the RF.

8.6.4. Where any system tests are required to verify electrical continuity, hydraulic connections, rigging assembly or otherwise, detailed procedures must be provided. These procedures must identify all of the conditions to be satisfied, precautions to be taken, measurements to be recorded and the expected results and tolerances. A list

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of the required test equipment, any special tools and possible equipment adjustments must be included.

- 8.6.5. The Contractor's Field Service Representative is required to attend and advise the RF and Inspector during the assembly, set-to-work and system testing of the crane.
- 8.6.6. The results of any system tests will be provided to the Contractor for inclusion in the Trials Record Booklet.

## **8.7. SITE ACCEPTANCE TESTS & TRIALS**

- 8.7.1. The Contractor must provide a Site Acceptance Tests & Trials (SAT) Plan.
- 8.7.2. The SAT Plan must include all tests and trials which must be performed upon site assembly of the crane in order to satisfy this SOR, and in order to support certification by the selected IACS body and TCMSS. The SAT must identify all conditions, precautions, adjustments, expected test results, tolerances, and test equipment required to verify the correct operation of the crane, including all of its associated equipment and systems, and must demonstrate the full range of operations and all capabilities of the crane.
- 8.7.3. The SAT Plan must be accepted by the the attending IACS Surveyor, the ABS Surveyor on behalf of TCMSS and the Inspector.
- 8.7.4. The Contractor's Field Service Representative is required to attend and advise the RF and Inspector during the SAT.
- 8.7.5. The results of the SAT tests & trials must be acceptable to the attending IACS Surveyor, the ABS Surveyor on behalf of TCMSS and the Inspector. The results of the SAT will be provided to the Contractor for inclusion in the Trials Record Booklet.

## **8.8. SEA TRIALS**

- 8.8.1. CCG may conduct optional Sea Trials of the crane.
- 8.8.2. If requested, the Contractor's Field Service Representative will be required to attend the Trials. The results of the Sea Trials, if conducted, will be provided to the Contractor for inclusion in the Trials Record Booklet.

## **8.9. FINAL INSPECTION & ACCEPTANCE**

- 8.9.1. Final Inspection must not be performed until all tests and trials have been satisfactorily completed with data available for review. The crane must be ready for service in all respects and any identified discrepancy must have been corrected.
- 8.9.2. The Technical Authority, or a representative of the Technical Authority, will conduct the final inspection and will advise the Contracting Authority when the crane is ready for Acceptance as per the Contract.

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## **9. FIELD SERVICE REPRESENTATIVE**

### **9.1. SEPARATE CONTRACT**

- 9.1.1. The Repair Facility (RF) will be separately responsible to engage a Field Service Representative, certified by the Contractor and knowledgeable of the crane, to attend at the erection site to observe and advise the RF and the Inspector regarding the assembly, installation, testing and trialing of the crane.

## **10. INTEGRATED LOGISTIC SUPPORT**

### **10.1. GENERAL**

- 10.1.1. The Contractor must provide all documents listed below and elsewhere in this SOR. A reference list for documents is included at Appendix A.
- 10.1.2. General requirements for bid documents are stated in Solicitation and the Annex of the Solicitation entitled "Evaluation Plan".

### **10.2. DESIGN DRAWINGS & REPORTS**

- 10.2.1. Technical information, including design drawings, calculations and reports, and including any relevant documents provided initially through the Contractor's bid response, must be submitted to the TA for review and comment. Such technical information must be kept up to date including any changes required by either the selected IACS member or ABS on behalf of TCMSS and changes required by the TA.
- 10.2.2. All technical information to be included in the Crane Manual [10.4] must be updated to reflect the as-finished condition on board the vessel before being submitted to the TA, excepting for Tests and Trials Records which are understood to be contemporaneous.

### **10.3. DOCUMENTATION STANDARDS**

- 10.3.1. Preliminary design and in-process production documents, including tests and trials field copies, must be provided in English.
- 10.3.2. Electronic documentation must be provided in PDF format and in original source editable format, latest version of either Word or Excel or AutoCad, unless otherwise approved by the TA.
- 10.3.3. Preliminary documentation must be provided electronically via email, memory stick or FTP site and, when so requested, in 2 paper copies.
- 10.3.4. All final documentation listed at sections [10.4 through 10.10] must be provided in both official languages (English and French), excepting that test and trials record sheets, drawings and the Training Manual need not be translated, as follows:
- 10.3.4.1. One (1) electronic copy of each document in both PDF format and in the original source editable format, latest version of either Word or Excel or AutoCad, via memory stick or FTP site (not email), in both official languages (English and French).
- 10.3.4.2. Three (3) paper copies of each document in English, printed on acid free 24 pound paper, with two (2) copies bound inside hard covers and the 3rd copy loose bound inside 3-ring binders; and,

10.3.4.3. One (1) paper copy of each document in French, printed on acid free 24 pound paper, loose bound inside 3-ring binders.

10.3.5. Drawings must conform with the CCG drawing standard [Ref 7].

#### **10.4. CRANE MANUAL**

10.4.1. The Contractor must provide a comprehensive CRANE MANUAL which must include all general information in sufficient detail to support all operational and maintenance requirements for the crane. The CRANE MANUAL, including any necessary Annexes and supporting documents, must fully describe all features of the crane and document its production, tests, trials and certification.

10.4.2. All original classification certificates and TCMSS Notices of Compliance must be separately delivered to the TA – copies only must be included in the CRANE MANUAL.

10.4.3. This document must be laid out in logical sections such as:

TABLE OF CONTENTS

INDEX TO DOCUMENTS (separate manuals)

Maintenance Manual

Recommended Spares

Special Purpose Tools

Operator and Safety Manual

Quick Reference Guide

Training Manual

1 – DESCRIPTION

2 – CERTIFICATION

3 – LOAD RADIUS DIAGRAMS

4 – ARRANGEMENT DRAWINGS

5 – STRUCTURAL DRAWINGS

6 – ELECTRICAL SYSTEM SCHEMATICS

7 – ELECTRICAL LOAD ANALYSIS

8 – HYDRAULIC POWER PACKS

9 – HYDRAULIC SCHEMATICS

10 – HYDRAULIC CYLINDERS

11 – CONTROL AND SAFETY SYSTEM SCHEMATICS

12 – PRIMARY CONTROL STATION

13 – REMOTE CONTROL (BELLY PACK) STATION

14 – RIGGING DIAGRAM

15 – LOAD HOOKS AND LOOSE GEAR

## 16 - MISCELLANEOUS

ANNEX I – (separate document)

A - ILLUSTRATED PARTS BREAKDOWN DIAGRAMS

B – DETAILED PARTS LIST

ANNEX II – (separate document)

A – SUPPLIER MANUALS

ANNEX III : (separate document)

A – CLASS CERTIFICATES, TCMSS NOTICES OF COMPLIANCE (etc., copies only)

B – MATERIAL, EQUIPMENT & RIGGING TEST CERTIFICATES

C - TESTS AND TRIALS RECORDS

D – MATERIAL SAFETY DATA SHEETS (MSDS)

### **10.5. MAINTENANCE MANUAL**

10.5.1. Monthly Maintenance Routines:

10.5.1.1. The Contractor must provide detailed instructions for ship's personnel to perform routine inspections and maintenance on a 28 day routine, or more often if necessary.

10.5.2. Annual Maintenance Routines:

10.5.2.1. The Contractor must provide detailed instructions for ship's personnel to perform all necessary annual inspections and maintenance.

10.5.2.2. These routines may rely on the Monthly Routines identified above, where applicable.

10.5.3. Quinquennial Recertification Requirements:

10.5.3.1. The Contractor must identify the requirements and provide detailed instructions for a contractor, assisted by an OEM FSR, to perform all inspections, maintenance and replacements, tests and trials necessary to maintain certification of the crane IAW TCMSS requirements.

10.5.4. Trouble Shooting Procedures

10.5.4.1. Signal interface list between the Crane and the vessel's systems in the original editable source file format, including data on the electrical signal characteristics such as voltage, current, frequency, digital input/output, and analog input/output, sensor or field device data, signal and connector identification, etc.; at least the following ship's systems must be considered:

- 10.5.4.1.1. Navigation;
- 10.5.4.1.2. Internal communication;
- 10.5.4.1.3. External communication; and,
- 10.5.4.1.4. Alarm and monitoring.

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## **10.6. RECOMMENDED SPARES**

- 10.6.1. The Contractor must provide a Recommended Spares List (onboard) which identifies the spare parts suitable for two (2) preventative maintenance routines and any other critical spares which should be carried on board.
- 10.6.2. The Contractor must also provide a Recommended Spares List (24 month) which identify the spare parts suitable for two (2) years of maintenance routines and any other critical spares which should be stocked as "depo" spares.
- 10.6.3. Additionally the Contractor must provide a list of any additional replacement parts particular to quinquennial recertification requirements.
- 10.6.4. Each of the spares lists must identify:
  - 10.6.4.1. Part name, part number;
  - 10.6.4.2. Description and/or identifying features;
  - 10.6.4.3. Installation location (Parent part name, parent part number (where applicable));
  - 10.6.4.4. Recommended number of units;
  - 10.6.4.5. Packaging & storage requirements;
  - 10.6.4.6. Shelf life;
  - 10.6.4.7. Lead time for delivery;
  - 10.6.4.8. Supplier (including address, contact and phone number); and,
  - 10.6.4.9. Current price.

## **10.7. SPECIAL PURPOSE TOOLS**

- 10.7.1. The Contractor must identify any special purpose tools, not generally commercially available, which are required either for routine inspection and maintenance or for the quinquennial re-certification of the crane.
- 10.7.2. The special purpose tools list may be included in the Maintenance Manual or may be under separate cover, and must identify:
  - 10.7.2.1. Part name, part number;
  - 10.7.2.2. Description and/or identifying features;
  - 10.7.2.3. Purpose or procedure applicable to the tool;
  - 10.7.2.4. Lead time for delivery;
  - 10.7.2.5. Supplier (including address, contact and phone number); and,
  - 10.7.2.6. Current price.

## **10.8. OPERATOR & SAFETY MANUAL**

- 10.8.1. The Contractor must provide a manual of instructions for the safe operation of the crane.
- 10.8.2. The manual must provide a safety guide applicable to crane operations in general and instructions specific to the subject crane for the following, as applicable:
  - 10.8.2.1. Pre-start daily check requirements;
  - 10.8.2.2. Start-up procedure and warm-up requirements, if any;
  - 10.8.2.3. Detailed description of safety systems;
  - 10.8.2.4. Complete description of controls;
  - 10.8.2.5. Safe operating procedures;
  - 10.8.2.6. Stowage procedure;
  - 10.8.2.7. Shut-down procedure and post-operation requirements, if any;

- 10.8.2.8. Description of sea states including visual reference; and,
- 10.8.2.9. All load radius charts.

10.8.3. The load radius charts must be included for each hoist in all applicable sea states and for personnel lifting.

## **10.9. QUICK REFERENCE GUIDE**

10.9.1. The Contractor must provide a Quick Reference Guide, intended as an overview of the operating and safety procedures applicable to the crane. This booklet must be prepared and published on ½ sized (5 ½ x 8 ½") sheets and must include:

- 10.9.1.1. Start-up and shut-down procedures;
- 10.9.1.2. Guide to the operator controls;
- 10.9.1.3. Safe operating procedures;
- 10.9.1.4. Description of sea states including visual reference; and,
- 10.9.1.5. All load radius charts.

10.9.2. In addition to the requirements at [10.3], 3 copies of this guide, published on indelible/waterproof sheets, must be provided: 1 copy must be secured in an obvious location at the main control console.

## **10.10. TRAINING MANUAL**

10.10.1. The Contractor must provide a Training Manual intended for instruction of experienced crane operator's. The manual must cover at least the following topics:

- 10.10.1.1. Review of general safety;
- 10.10.1.2. Familiarization with the subject crane;
- 10.10.1.3. Safety matters and safety systems particular to the subject crane; and,
- 10.10.1.4. Practical operation instruction.

10.10.2. The Training Manual may rely on the other manuals defined herein for detailed instructional purposes pertaining to the equipment.

## **10.11. TRAINING PROGRAM**

10.11.1. The Contractor must provide one or more Field Service Representatives, certified by the Contractor and knowledgeable of the crane, to deliver on-site training to CCG personnel. Training must be provided in 2 sessions of 3 days each.

10.11.2. Each training session must be delivered on-site in British Columbia instructing between 5 and 10 personnel. The first seminar will be scheduled to coincide with final on-site trials of the crane at the RF. The second seminar will be scheduled for about 2 to 4 weeks later at Sidney BC.

10.11.3. Each seminar must comprise:

- 10.11.3.1. A 1 day training session regarding safety systems and safe operation of the crane including practical operational experience. CCG will provide sample weights, rigging and any required supporting personnel. This session must be supported by a specific Training Manual, as noted above; and,
- 10.11.3.2. A 2 day training session regarding maintenance and trouble-shooting of the crane, including exchanging PLCs and restarting the crane after software malfunction or re-load. This session must be supported by the Crane Manual and a Maintenance Manual, as noted above.

## **10.12. STANDING OFFER FOR PARTS & SERVICES**

10.12.1. The supply of replacement parts and support services, if required, will be addressed in a separate contract.

## **11. WARRANTY**

11.1.1. A warranty period of not less than 24 months is requested, however the minimum warrantee requirements are stated in the Contract.

11.1.2. The warranty period must commence from the in-service date of the crane, which date shall be not earlier than successful completion of all tests and trials, rectification of any deficiencies identified at that time, and final acceptance of the crane as per Contract.

## **APPENDIX A – SCOPE of SUPPLY/SCHEDULE of DELIVERABLES**

Table A-1 below is provided as an summary example of the deliverables required under the Contract, however this table is not necessarily comprehensive. The Contractor must provide their own Schedule of Deliverable with their response to the Request for Proposal, which must be sufficiently detailed to demonstrate their understanding of all of the requirements. The Contractor's Schedule of Deliverables must be updated within 30 days of award of any contract, and further revised as and when necessary.

**TABLE A-1: EXAMPLE SCOPE OF SUPPLY & SCHEDULE OF DELIVERABLES**

<i>Spec Ref</i>	<i>Item No.</i>	<i>Part or WBS No.</i>	<i>Name</i>	<i>Description</i>	<i>Start Date</i>	<i>Ship Date</i>
1.0			<b>Overview</b>			
1.3	1		Scope of Supply	Tabular		
1.5	1		Production Schedule	Tabular		
1.7	1		Correspondence/Class	As required		
	2		Correspondence/ABS	As required		
	3		Tests & Trials reports	As required		
2.0			<b>General Description</b>			
2.2	1		Base column	Structure		
	2		Slewing Ring	Equipment		
	3		Machy house	Structure		
	4		Main boom	Structure		
	5		Jib boom	Structure		
	6		Boom crutch	Structure		
4.0			<b>Load Rating &amp; Perform</b>			
4.1	1		Load rating charts	As required		
5.0			<b>Design, Certification &amp; Construction</b>			
5.1	1		Class certificates	Certificates		
5.2	2		Regulatory certificates	Certificates		
5.7	1		Hydraulic power packs	Equipment		
	2		Hydraulic controls, meters and safety systems	Equipment		
	3		Main winch "A"	Equipment		
	4		Aux winch "B"	Equipment		
	5		Aux winch "C"	Equipment		
	6		Slewing machinery	Equipment		
	7		Main luffing cylinders	Equipment		

	8		Jib luffing cylinders	Equipment		
5.8	1		Crane controls, PLC requirements	Equipment		
	2		Software requirements	System		
	3		Data logging requirements	System		
	4		Load & moment system	System		
	5		Safety systems	System		
	6		Main control system	Equipment		
	7		Remote control system	Equipment		
5.9	1		Main load hook "A"	Rigging		
	2		Aux load hook "B"	Rigging		
	3		Aux load hook "C"	Rigging		
	4		Hoist cables A, B & C	Rigging		
	5		Load sensing devices A, B & C	Equipment		
	6		Test certificates for all rigging, hooks and loose parts	Certificates		
5.10	1		Operator's cabin	Structure		
	2		Weather tight doors, windows & safety bars, (etc.)	Outfit		
	3		Adjustable chair and cabin outfit	Outfit		
	4		Ergonomic control console	Controls		
	5		Console instrumentation	Controls		
8.0			<b>Tests &amp; Trials</b>			
8.1	1		Tests & Trials Plans	Documents		
8.2	1		Material Test Certificates	Certificates		
8.3	1		Production T & T Reports	Inspections		
8.4	1		FAT	Inspections		
8.5	1		Site Assembly Instructions	Booklet		
8.6	1		SAT	FSR attendance		
8.7	1		Sea Trials	FSR attendance (if requested)		
8.8	1		Final Inspection	FSR (attendance optional)		
10.2	1		Design drawings and reports	As required		
10.4	1		Crane manual	Binder		
10.5	1		Maintenance manual	Binder		
10.6	1		Recommended spares	Lists		
10.7	1		Special purpose tools	List		
10.8	1		Operator & safety manual	Binder		
10.9	1		Quick reference guide	Booklet		

Solicitation No. - N° de l'invitation  
F1782-19C020/A  
Client Ref. No. - N° de réf. du client  
F1782-19C020/A

Amd. No. - N° de la modif.  
File No. - N° du dossier  
XLV-9-42175

Buyer ID - Id de l'acheteur  
XLV176  
CCC No./N° CCC - FMS No./N° VME

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10.10	1		Training manual	Binder		
10.11	1		Training program	As required		

**END OF DOCUMENT**

**ANNEX - B - BASIS OF PAYMENT**

**B.1 Contract Price**

<b>a.</b>	<p><b>Known work</b>          For the work as stated in Part 7, article 1 and as specified in Annex A – Statement of work</p> <p style="text-align: right;">For a Firm price of:</p> <p>( Note refer to Price in PDS –Annex D- Item 1 to 25)</p>	\$
<b>b.</b>	<p><b>Shipping</b>          Shipping cost including crating/ packaging as per contract a article</p> <p style="text-align: right;">For a Firm price of:</p> <p>( Note: refer to Price in PDS –Annex D- Item 27 and 28)</p>	\$
<b>c..</b>	<p><b>Custom and duties:</b>          Shipping custom and duties</p> <p style="text-align: right;">For a Firm price of:</p> <p>( Note: refer to Price in PDS –Annex D- Item 29)</p>	\$
<b>d.</b>	<p><b>Warranty</b>          Cost for additional warranty</p> <p style="text-align: right;">For a Firm price of:</p> <p>( Note: Price in PDS –Annex D- Item 26)</p>	\$
<b>e.</b>	<p><b>Contract Price (a. + b. + c. + d.)</b></p> <p>Applicable taxes are extra</p> <p style="text-align: right;">For a Firm price of:</p>	\$

Note: The “Total Estimated Cost” or “Revised Estimated Cost” given on Page 1 of the Contract or Contract Amendment includes an estimate of the Applicable Taxes [refer to the General Conditions].

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## ANNEX – C - INSURANCE REQUIREMENT

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$3,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
  - a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
  - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
  - c. 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.
  - d. 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.
  - e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
  - f. 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.
  - g. Employees and, if applicable, Volunteers must be included as Additional Insured.
  - h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
  - i. 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.
  - j. Notice of Cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.
  - k. 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.
  - l. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
  - m. Non-Owned Automobile Liability - Coverage for suits against the Contractor resulting from the use of hired or non-owned vehicles.
  - n. Advertising Injury: While not limited to, the endorsement must include coverage piracy or misappropriation of ideas, or infringement of copyright, trademark, title or slogan.
  - o. All Risks Tenants Legal Liability - to protect the Contractor for liabilities arising out of its occupancy of leased premises.
  - p. Litigation Rights: Pursuant to subsection 5(d) of the [Department of Justice Act](#), S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

**For the province of Quebec, send to:**

*Director Business Law Directorate,  
Quebec Regional Office (Ottawa),  
Department of Justice,*

Solicitation No. - N° de l'invitation  
F1782-19C020/A  
Client Ref. No. - N° de réf. du client  
F1782-19C020/A

Amd. No. - N° de la modif.  
File No. - N° du dossier  
XLV-9-42175

Buyer ID - Id de l'acheteur  
XLV176  
CCC No./N° CCC - FMS No./N° VME

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*284 Wellington Street, Room SAT-6042,  
Ottawa, Ontario, K1A 0H8*

**For other provinces and territories, send to:**

*Senior General Counsel,  
Civil Litigation Section,  
Department of Justice  
234 Wellington Street, East Tower  
Ottawa, Ontario K1A 0H8*

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

**ANNEX - D – FINANCIAL BID PRESENTATION SHEET**

**Table D.1 Evaluation of Price**

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, Canadian customs duties and excise taxes included.

a.	<p><b>Known work</b>          For the work as stated in Part 7, article 1 and as specified in Annex A – Statement of work          For a Firm price of: \$          ( Note refer to Annex D, Line a.)</p>	
b.	<p><b>Shipping</b>          Shipping cost including crating/ packaging as per contract a article          For a Firm price of: \$          ( Note refer to Annex D, Line b.)</p>	
c.	<p><b>Custom and duties:</b>          Shipping custom and duties          For a Firm price of: \$          (( Note refer to Annex D, Line c.)</p>	
d.	<p><b>Warranty</b>          Cost for additional warranty          For a Firm price of: \$          (( Note refer to Annex D, Line d          .)</p>	
e.	<p><b>Evaluation Price (a. + b. + c. + d.)</b>          Applicable taxes are Excluded          For a Firm price of: \$</p>	

**ANNEX - E – PRICING DATA SHEET (PDS)**

Detailed prices data sheet: Breakdown for the KB crane, design, manufacturing, special purpose tool, tests, procedure and documentations, certification and training.

**Table D.1**

PDS No:	SOW Ref.	Price Breakdown	Unit Price	Details	Total Price	Direction
1	5.0/5.2.3	Price for the Design, drawing approval, (IACS)	\$	Know Work	\$	Enter value in Annex D , Table D.1 Line a.
2	SOW	Price for Rotating part construction ( Above pedestal excluding boom/jibs)	\$			
3		Price for pedestal construction	\$			
4	SOW	Price for Booms construction ( Inner, Intermediate Outer jibs as applicable)	\$			
5	SOW	Price for cabin construction – Guard railing as applicable	\$			
6	6.0	Price for the Crane painting	\$			
7	SOW	Ancillaries Installation - Price to install Hoists and Rigging	\$			
8	SOW	Ancillaries Installation – Price to install loose part,	\$			
9	SOW	Ancillaries Installation - Price to install all electrical,	\$			
10	SOW	Ancillaries Installation - Price to install, hydraulic system	\$			
11	SOW	Ancillaries Installation - Price to install, items not covered in above	\$			
12	SOW	Price for KB crane full assembly of the crane	\$			
13	8.5	Factory Acceptance Test	\$			
14	8.7	Site Assembly Test and trials	\$			
15	8.6	Site assembly instruction	\$			
16	10.2	Design drawing and reports	\$			
17	10.3	Crane manual	\$			
18	10.5	Maintenance manual	\$			
19	10.6	Recommended spares list	\$			
20	10.7	Special Purpose tool list	\$			
21	10.8	Operator and safety manual	\$			
22	10.9	Quick reference guide	\$			
23	10.10	Training manual	\$			
24	10.11	Training program	\$			
25	SOW	Price for- Classification societies for certification and inspections.	\$			
26	11	Price for additional Warranty ( cost for one year additional above terms and conditions)	\$	Warranty	\$	Enter value in Annex D, Table D.1 Lined. d.
27	N/A	Price for Crane crating packaging – Shipment crates	\$	Shipping	\$	Enter value in Annex D , Table D.1 Line b.
28	N/A	Price for Crane shipping cost DDP Incoterms to destination per Article	\$			
29	N/A	Price of Crane shipping / Custom and duties	\$	Custom and duties	\$	Enter value in Annex D, Table D.1 Line c.

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## ANNEX – F – EVALUATION CRITERIA

### F.1 GENERAL

- F.1.1** The general requirements for the Bidder's *Technical Bid* are stated in Parts 1 and 3 of the Bid Solicitation.
- F.1.2** The *Evaluation Procedure* and definition of the *Evaluation Team* are stated in Part 4 of the Bid Solicitation. This Annex gives the detailed *Evaluation Criteria* and *Scoring Procedure*.
- F.1.3** In order that a technical evaluation of the Bid can be conducted, the Bid must be compliant with all of the bid deliverable requirements, which are summarized in Part 3 of the Bid Solicitation; additionally, the *Technical Bid* must be compliant with Article 5 below. It is the Bidder's responsibility to clearly demonstrate their capabilities and capacity to complete all of the Work and all other requirements stated in the Bid Solicitation. Bidders should describe in their bid response their capabilities, how they will comply with the mandatory requirements and how they will deliver the requested goods and/or services.
- F.1.4** Evaluation considerations will include, but not necessarily be limited to, the following key elements of the bidder's response to the Bid Solicitation:
- Bidders must demonstrate their Understanding of the scope of work.
  - Bidders must demonstrate their Competency to carry out the specified work.
  - Bidders must demonstrate their Capability to carry out the specified work.
  - Bidders must demonstrate their Assessment of Risks and Mitigation methods.
  - Bidders must identify the time frame required for the completion of mandatory work.
- F.1.5** It is requested in Part 3 of the Bid Solicitation that the Bidder present topics in the order of these evaluation criteria and under the same headings. Alternatively, the Bidder should include in their Technical Bid an applicability matrix wherein they identify, by page number, where each of the criterion is addressed in their Bid.

### F.2 MANDATORY TECHNICAL CRITERIA

- F.2.1** The Mandatory Technical Criteria are detailed on Evaluation [Table F.6.1 and F.7.1](#).
- F.2.2** Mandatory Criteria will be assigned either a pass or fail by the evaluation team. Any Bid which fails to comply with any one Mandatory Criterion will be declared non-responsive.
- E.2.3** Some, or all, of the Mandatory Criteria may also be point rated for their technical merit.

### F.3 POINT-RATED TECHNICAL CRITERIA

- F.1** The Point-Rated Technical Criteria are detailed on Evaluation [Table F.8.1](#).
- F.3.2** Point rating will be conducted in accordance with the *Scoring Procedure* given under Article 4 below.

### F.4 SCORING PROCEDURE

Point rating values for specific criteria may be detailed on Evaluation [Table F.8.1](#), otherwise the following procedure will apply:

- F.4.1** Each of the criterion to be point rated will be assigned a *Raw Score [RS]* by the evaluation team. Scores are assigned from a range of 0 to 10, as defined below:

- 
- a. Score 0  
Unacceptable: Zero (0) points will be awarded to responses where the Bidder has failed either to provide any information or provided information which cannot be understood.
- b. Score 3  
Unacceptable: 3 points will be awarded to responses where the Bidder has failed to demonstrate their understanding of the requirement and/or their response is clearly unacceptable.
- c. Score 4  
Marginally unacceptable: 4 points will be awarded to responses where the Bidder has not clearly demonstrated their understanding of the requirement or has not clearly identified their capability or willingness to comply with that requirement.
- d. Score 6  
Adequate: 6 points will be awarded to responses where the Bidder has demonstrated their general understanding of the requirement and has demonstrated their capability and willingness to comply with the requirement, however the solution offered is either marginal or is of lower quality, quantity or capacity than desired.
- e. Score 7  
Good: 7 points will be awarded to responses where the Bidder has clearly demonstrated their understanding of the requirement and has demonstrated their capability and willingness to completely satisfy that requirement.
- f. Score 8  
Superior: 8 points will be awarded to responses where the Bidder has clearly demonstrated their understanding of the requirement and has demonstrated their capability and willingness to completely satisfy that requirement. Additionally, the Bidder has offered to provide at least one of either higher quality, quantity or a greater level of effort than the minimum requirement.
- g. Score 10  
Outstanding: 10 points will be awarded to responses where the Bidder has clearly demonstrated their understanding of the requirement and has demonstrated their capability and willingness to completely satisfy that requirement. Additionally, the Bidder has offered to provide one or more of either higher quality, quantity or a greater level of effort than the minimum requirement, or exceptional quality or service.

Note that point values 1, 2, 5 or 9 are not used. The purpose is to create differences among the scores awarded in order to separate the proposals and help create meaningful rankings. Fractional values are not used for the same reason.

- F.4.2** Each member of the *Evaluation Team* will rate each proposal separately, arriving at a *Total Points* score for each bid without reference to other bids or to the rating by other members of the *Evaluation Team*, excepting that discussions for the purposes of technical clarification are permitted.
- F.4.3** Each rated criterion has been assigned a *Weight Factor [WF]*, indicated on Evaluation Table [F.8.1](#), generally from a range of 1 to 10, depending of the importance of that criterion.
- F.4.4** The Bidder's *Score* in each Criterion is determined by multiplication, as follows:  
$$\text{Score} = \text{RS} \times \text{WF}$$
- F.4.5** The *Total Points [TPts]* for the Bid will be determined by addition of the column under the heading "Score", averaged between all evaluators. The required minimum *TPts* is as stated (by percentage) at Part 4 of the Bid Solicitation, and as demonstrated at the foot of Evaluation [Table F.8.1](#).
- F.4.6** The *Evaluation Price [EP]*, will be determined by the Contracting Authority, (see the Financial Bid Presentation Sheet).

**F.4.7** The *Price per Point* will be determined by division, as follows:  

$$\text{Price per Point} = EP / TPTs$$

**F.4.8** The *Basis of Selection* is stated in Part 4 of the Bid Solicitation.

## **F.5 BIDDER'S TECHNICAL DOCUMENTATION**

In order that a technical evaluation of the Bid can be conducted, the Bidder must provide with their bid response the technical information listed at Section 5.1 below. The preferred formats are described at Section 5.2 below.

### **F.5.1 Requested Bid Deliverables (Technical Documentation)**

Item	SOR reference (if applicable)	TITLE	Document Requirements (See Document F-5.2 Notes 1 & 2)
1		Description of Crane	Written description must be provided which describes the physical characteristics of the crane.
2		Basis of Design and Performance Characteristics	See F-5.2 Document Note 8.
3		Example Certification	Certification from an IACS organization recognized by TCMSS for a previous similar crane.
4		General Arrangement Drawing	See F-5.2 Document Note 3.
5		Structural Assembly Drawings	See F-5.2 Document Note 4.
6		Mechanical and Hydraulics Drawings	See F-5.2 Document Note 5.
7		Electrical Drawings	See F-5.2 Document Note 5.
8		Equipment Information	See F-5.2 Document Note 6.
9		Rigging Diagram and Components	See F-5.2 Document Note 7.
10		Operating System Information	Identification of systems proposed and relevant supplier information. See Document Note 6.
11		Safety System Information	Identification of systems proposed and relevant supplier information. See Document Note 6.
12		Schedule of Deliverables	Preliminary schedule as per SOR section 1.3.
13		Corporate Experience	Demonstration of previous relevant work, similar cranes delivered within the past 10 years
14		Management Plans	Bidder must submit their management plans applicable to design and construction of the crane.
15		Production Schedule	Preliminary schedule as per SOR section 1.5
16		Risk Register	Bidder must develop and submit a Risk Register which identifies any likely risk which would impact either the design or construction

			schedule for the crane, and mitigation measures available.
17		Safety & Environmental programs	Bidder must submit examples of their Safety & Environmental programs applicable to construction of the crane.
18		Welding Certification	Demonstration of compliance with SOR section 5.6 including current CSA W47.1:09 certificate, or alternative standard.
19		Standard of Welding Certification (if other than CSA)	Alternative welding standard for approval, if applicable.
18		Weld Inspector Certification	Demonstration of compliance with SOR section 5.6 including current CSA W178.2 certificate, or alternative certification.
19		Standard of Weld Inspector Certification (if other than CSA)	Alternative weld inspector standard of certification for approval, if applicable.

### F.5.2 Preferred Document Content and Format Notes

- 1 - Bid deliverable technical information should be as complete and accurate as possible in order that the technical evaluation will be favorable towards the bid. Information which the bidder has verified to be accurate and directly applicable to the proposed crane should be marked "confirmed", however any information which has not been confirmed or is representational in nature must be marked "preliminary". All technical information is subject to verification by the *Evaluation Team*.
- 2 - Technical drawings must be provided in two (2) copies in standard formats such as A1 format or 11 x 17 inch (if legible at that size). Other technical documents must be provided in two (2) copies at either 8.5 x 11 size or, where necessary, in 11 x 17 inch size.
- 3 - General Arrangement Drawings must be accurately scaled showing the various major components such as the pedestal, slewing ring, machinery enclosure, operator cabin, main and jib booms and load hooks, and must indicate the range of articulation of the booms.
- 4 - Structural Assembly Drawings must be accurately to scale showing the assembly arrangement for the main components such as the pedestal, slewing ring, machinery enclosure, operator cabin, main and jib booms, hinging pins and mounting arrangements for the main hydraulic cylinders.
- 5 - Mechanical and Electrical Drawings may be representative, for example hydraulic system diagrams and electrical one-line drawings.
- 6 - Equipment Information must include supplier technical information for the major components such as the slewing ring, hydraulics power packs and hydraulic cylinders.
- 7 - Rigging Diagram and Components must include a rigging schematic and supplier information for cables, sheaves and hooks.
- 8 - The Bidder must clearly indicate the basis of design of the proposed crane, either a duplication of a previously constructed crane or if to be based on a previously constructed crane of similar design. Information must include load radius charts and other performance characteristics which is expected to be achieved.

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### F.6 MANDATORY REQUIREMENT

Proposals will be evaluated in accordance with the mandatory evaluation criteria as detailed herein. Bidders' proposals must clearly demonstrate they meet all Mandatory Requirements for the proposal to be considered for this work.

The bidder must include the following table in their proposal, indicating that their proposal meets the mandatory criteria, and provide the proposal page number or section that contains information to verify that the criteria has been met.

**Table F.6.1**

EVALUATION TABLE 1 - MANDATORY CRITERIA		Bid Identifier: _____	
Item	Description	Bid Ref Page No.	Comments
1.0	<b>MANDATORY BID RESPONSE DOCUMENTATION</b>		
1.2	<b>Design Drawings &amp; Technical Information</b>		
1	Bidder must provide general arrangement drawings, structural, mechanical, electrical and other detail drawings which describe the proposed crane		
2	Bidder must provide design information which describes the equipment, rigging, operating and safety systems of the proposed crane		
3	Bidder must provide proof that the proposed crane is based on an existing design previously constructed by the bidder		
4	Bidder must provide proof that the base design, previously constructed crane, has been certified by an IACS organization recognized by TCMSS		
5	Bidder must provide their Schedule of Deliverable as per SOR 1.3.2		
6	Bidder must provide their Production Schedule as per SOR 1.5.2		
7	Bidder must submit proof of registration to CSA W47.1:09 (R2019), or equal, as per SOR 5.6.1; and		
8	If "or equal", Bidder must submit the welding standard being complied with, for evaluation.		
9	Bidder must submit proof of certification to W178.2, or equal, as per SOR 5.6.3; and		

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1.3	10	If "or equal", Bidder must submit the weld inspection certification and standard being complied with, for evaluation.	
	FINANCIAL BID		
	1		
	2		

## F.7 MANDATORY TECHNICAL CRITERIAS

Table F.7.1

2.0	MANDATORY TECHNICAL CRITERIA			Bid Ref Page No.	Comments	Pass / Fail
Item	SOR Ref	Description				
2.1		<p><b>Business and Management Experience</b></p> <p>1 Bidder must have been in business and provided relevant service to customers for a minimum of 5 years</p> <p>2 Bidder must have experience in the integration and/or supply of marine offshore cranes of similar design, and of equal or greater capacity, within the past 10 years. Bidder must provide references and contact information applicable to at least 2 applicable projects.</p> <p>3 Bidder must have an established quality assurance and test facilities capable of carrying out, recording and reporting all tests and trials stated in the SOW. Bidder must provide an example summary report from a previous project.</p> <p>4 Bidder must be capable of delivering the completed crane, ready for assembly at destination, within 50 weeks of award of a contract</p>				
2.2	1.2	<b>Constraints</b>				
	1.2.1	Crane must be "self-contained" as described				
	1.2.2	Power supply must be 440 v 3 ph				
	1.2.3	Pedestal must comply with diameter requirement				
	1.2.4	Connection cabinet must be included				
	1.2.5	maximum weight must not exceed 70 tonnes				
2.3	2.2	<b>Physical Description (2.2) &amp; Hoists (2.3)</b>				
	2.2.1	Crane must be of a knuckle boom configuration				
	2.2.8	Slewing design must be 360 degree continuous				
	2.3.1	Crane must provide 3 hoists				
2.4	4.0	<b>Load Ratings &amp; Performance</b>				

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4.2.1	1	Hoist A must be minimum 20 t @ 9 m & 9 t @ 20 m in SS3			
4.2.2	2	Hoist A must be minimum 15 t @ 4.1 m in SS3			
4.2.4	3	Hoist A must be proportional controlled with hook speeds up to 40 m/min unloaded			
4.3.1	4	Hoist B must be minimum 7.5 t between 4.1 to 17.5 m in SS3			
4.3.3	5	Hoist B must be proportional controlled with hook speeds up to 60 m/min unloaded			
4.4.1	6	Hoist C must be minimum 5 t between 4.1 to 17.5 m in SS3			
4.4.3	7	Hoist C must be proportional controlled with hook speeds up to 70 m/min unloaded			
4.5.3	8	Hoist A, B & C must be rated to lift personnel, as stated			
4.6	11	Trim and lead angles in SS3 must be: 10/5/10/10, as stated			
4.9	12	Full range luffing under 9 t load must be not greater than 60 seconds, as stated			
2.5	5.8	<b>Electro-Hydraulic Design</b>			
	5.6.1	Crane must be provided with 2 equal power-packs, as stated			
Evaluator:		Name & Signature	Date	Overall evaluation of Mandatory Criteria PASS / FAIL	

**F.8 EVALUATED POINT RATED CRITERIA'S**

**Table F.8.1**

EVALUATION TABLE 2 - POINT RATED CRITERIA		Bid Identifier:				
Item	SOR Ref	Description	Bid Ref Page No.	Raw Score (0 - 10)	Weight Factor (WF)	Points
1.0		<p><b>EVALUATION OF BUSINESS &amp; MANAGEMENT CRITERIA</b></p> <p>Drawings and related design information are to be evaluated for completeness, clarity and suitability for purpose (Reference Nos are from line item 1.2 above)</p> <p>1 Bidder's relevant business experience: Raw Score = years experience / 2 (maximum 10 pts)</p> <p>2 Bidder's relevant project experience: Raw Score = No of projects / 2 (maximum 10 pts)</p> <p>3 Bidder's test facility located: Within Canada, Raw Score = 10 pts Within North America, Raw Score = 4 pts Outside of North America, Raw Score = 0 pts</p> <p>4 Delivery, ready for assembly at destination, period after award:30 weeks after award, Raw Score = 10 pts Deduct 0.5 pts for each additional week</p>		10.0 10.0 10 10.0	8 8 5 5	75 75 50 50
3.0		<p><b>EVALUATION OF TECHNICAL DOCUMENTATION</b></p> <p>Drawings and related design information are to be evaluated for completeness, clarity and suitability for purpose (Reference Nos are from line item 1.2 above)</p> <p>1.1 General arrangement</p> <p>1.2 Structural drawings</p> <p>1.3 Mechanical &amp; hydraulics drawings</p> <p>1.4 Electrical drawings</p>		10 10 10 10	10 5 5 5	100 50 50 50

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	2.1 Equipment information	10	5	50
	2.2 Rigging information	10	5	50
	2.3 Operating system information	10	10	100
	2.4 Safety system information	10	10	100
	3.1 Design of crane: Copy to previous model score 10 pts; Modified from previous model score 8 pts; Original design not acceptable score 0 pts.	10	15	150
	5.1 Schedule of Deliverables (Demonstration of Bidder's understanding of the complete requirement)	10	10	100
	6.1 Production Schedule (Demonstration of Bidder's capacity to plan/schedule the project)	10	5	50
4.0	<b>LOAD RATINGS and PERFORMANCE</b>			
	4.2 A Hoist A Load Moment calculation in SS 3: Load moment complies with SOR 4.2.3, score 9 pts; Raw score = Load moment / 20 (maximum 10.0 pts)	10.0	25	250
	4.5 A Hoist A capacity in SS 4: Raw score = Load moment / 15 (maximum 10 pts)	10.0	15	150
	4.3 B Hoist B capacity calculation: SWL complies with SOR 4.3.1, score 7.5 pts; Raw score = SWL x 10 / 9 (maximum 10.0 pts)	10.0	10	100
	4.4 C Hoist C capacity calculation: SWL complies with SOR 4.4.1, score 5.0 pts; Raw score = SWL x 10 / 7.5 (maximum 10 pts)	10.0	10	100
Evaluator:		Total possible points	1700	
		Total points [TPts] awarded		1700
		Awarded % of possible points		100.0%
		Required percentage		65.0%

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## **ANNEX – G - to PART 3 OF THE BID SOLICITATION**

### **ELECTRONIC PAYMENT INSTRUMENTS**

The Bidder accepts to be paid by any of the following Electronic Payment Instrument(s):

- VISA Acquisition Card;
- MasterCard Acquisition Card;
- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);

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**ANNEX – H - to PART 5 OF THE BID SOLICITATION FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION**

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\) – Labour's](#) website.

Date: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Bidder certifies having no work force in Canada.
- A2. The Bidder certifies being a public sector employer.
- A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.
- OR**
- A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity \(LAB1168\)](#) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Bidder is not a Joint Venture.

**OR**

- B2. The Bidder is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)