



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

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

11 Laurier St. / 11, rue Laurier

Place du Portage , Phase III

Core 0B2 / Noyau 0B2

Gatineau

Québec

K1A 0S5

Bid Fax: (819) 997-9776

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

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

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

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

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

Comments - Commentaires

Title - Sujet Mooring equipment	
Solicitation No. - N° de l'invitation F7047-180145/A	Date 2019-04-18
Client Reference No. - N° de référence du client F7047-180145	
GETS Reference No. - N° de référence de SEAG PW-\$\$ML-062-27285	
File No. - N° de dossier 062ml.F7047-180145	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-06-03	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Roberge-Butcher, Michelle	Buyer Id - Id de l'acheteur 062ml
Telephone No. - N° de téléphone (873) 469-3524 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Marine Machinery and Services / Machineries et services
maritimes

11 Laurier St. / 11, rue Laurier

6C2, Place du Portage

Gatineau

Québec

K1A 0S5

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

Mooring Equipment

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Amd. No. - N° de la modif.
File No. - N° du dossier
062ml.F7047-180145

Buyer ID - Id de l'acheteur
062ml
CCC No./N° CCC - FMS No./N° VME

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PART 1 - GENERAL INFORMATION

1.1 Requirement

The Canadian Coast Guard (CCG), Department of Fisheries and Oceans, has a requirement for components, assemblies and anchors for mooring aids to navigation in Canadian waters, in accordance with Annex "A" Requirement, Annex "B" Mooring Hardware for Aids to Navigation – Technical Specification and Annex "C" Serrated Cast Iron Anchors & Sinkers – Technical Specification, for supply and delivery to CCG St. John's Base, Newfoundland, CCG Dartmouth Base, Nova Scotia and CCG Charlottetown Base, Prince Edward Island.

1.2 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.

1.3 Trade Agreements

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), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

1.4 epost Connect service

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.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

The 2003 standard instructions is amended as follows:

- Section 08, entitled Transmission by facsimile or by epost Connect, is amended as follows:
 - subsubsection 2. is deleted entirely and replaced with the following:
 2. epost Connect
 - a. Unless specified otherwise in the bid solicitation, bids may be submitted by using the [epost Connect service](#) provided by Canada Post Corporation.
 - i. PWGSC, National Capital Region: The only acceptable email address to use with epost Connect for responses to bid solicitations issued by PWGSC headquarters is:

tpsgc.dgareceptiondessoumissions-abbidreceiving.pwgsc@tpsgc-pwgsc.gc.ca

or, if applicable, the email address identified in the bid solicitation.

-
- ii. PWGSC regional offices: The only acceptable email address to use with epost Connect for responses to bid solicitations issued by PWGSC regional offices is identified in the bid solicitation.
- b. To submit a bid using epost Connect service, the Bidder must either:
- i. send directly its bid only to the specified PWGSC Bid Receiving Unit, using its own licensing agreement for epost Connect provided by Canada Post Corporation; or
 - ii. send as early as possible, and in any case, at least six business days prior to the solicitation closing date and time, (in order to ensure a response), an email that includes the bid solicitation number to the specified PWGSC Bid Receiving Unit requesting to open an epost Connect conversation. Requests to open an epost Connect conversation received after that time may not be answered.
- c. If the Bidder sends an email requesting epost Connect service to the specified Bid Receiving Unit in the bid solicitation, an officer of the Bid Receiving Unit will then initiate an epost Connect conversation. The epost Connect conversation will create an email notification from Canada Post Corporation prompting the Bidder to access and action the message within the conversation. The Bidder will then be able to transmit its bid afterward at any time prior to the solicitation closing date and time.
- d. If the Bidder is using its own licensing agreement to send its bid, the Bidder must keep the epost Connect conversation open until at least 30 business days after the solicitation closing date and time.
- e. The bid solicitation number should be identified in the epost Connect message field of all electronic transfers.
- f. It should be noted that the use of epost Connect service requires a Canadian mailing address. Should a bidder not have a Canadian mailing address, they may use the Bid Receiving Unit address specified in the solicitation in order to register for the epost Connect service.
- g. For bids transmitted by epost Connect service, Canada will not be responsible for any failure attributable to the transmission or receipt of the bid including, but not limited to, the following:
- i. receipt of a garbled, corrupted or incomplete bid;
 - ii. availability or condition of the epost Connect service;
 - iii. incompatibility between the sending and receiving equipment;
 - iv. delay in transmission or receipt of the bid;
 - v. failure of the Bidder to properly identify the bid;
 - vi. illegibility of the bid;
 - vii. security of bid data; or,
 - viii. inability to create an electronic conversation through the epost Connect service.
- h. The Bid Receiving Unit will send an acknowledgement of the receipt of bid document(s) via the epost Connect conversation, regardless of whether the conversation was initiated by the supplier using its own license or the Bid Receiving Unit. This acknowledgement will confirm only the receipt of bid document(s) and will not confirm if the attachments may be opened nor if the content is readable.
- i. Bidders must ensure that they are using the correct email address for the Bid Receiving Unit when initiating a conversation in epost Connect or communicating with the

Bid Receiving Unit and should not rely on the accuracy of copying and pasting the email address into the epost Connect system.

- j. A bid transmitted by epost Connect service constitutes the formal bid of the Bidder and must be submitted in accordance with section 05.

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

2.1.1 SACC Manual Clauses

[B1000T](#) (2014-06-26), Condition of Material – Bid

2.1.2 Best Delivery Date

While delivery is requested by June 28, 2019, the best delivery that could be offered is _____.

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated in the bid solicitation.

Note: For bidders choosing to submit using epost Connect for bids closing at the Bid Receiving Unit in the National Capital Region (NCR) the email address is:

tpsgc.dgareceptiondessomissions-abbidreceiving.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.

2.3 Enquiries - Bid Solicitation

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

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the 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.

2.4 Applicable Laws

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

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

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

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

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 – one (1) hard copy
- Section II: Financial Bid – one (1) hard copy
- Section III: Certifications – one (1) hard copy

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 explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment.

3.1.1 Electronic Payment of Invoices – Bid

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

If Annex “E” 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.

3.1.2 Exchange Rate Fluctuation

SACC *Manual* clause [C3011T](#) (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

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

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 will evaluate the bids.

4.1.1 Technical Evaluation

A bid must comply with the requirements of the bid solicitation to be declared responsive.

4.1.2 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, Delivery Duty Paid (DDP) destination, Canadian customs duties and excise taxes included.

Bidder to complete Annex “H” Financial Evaluation Criteria

4.2 Basis of Selection

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

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 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 provided 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 procurement 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.

Bidder must complete Annex “G” Integrity Provisions – Associated Form as follows:

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of all names of all individuals who are currently directors of the Bidder.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

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.

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 - RESULTING CONTRACT CLAUSES

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

6.1 Security Requirements

6.1.1 There is no security requirement applicable to the Contract.

6.2 Requirement

The Contractor must supply and deliver the components, assemblies and anchors for mooring aids to navigation in Canadian waters, in accordance with Annex "A" Requirement, Annex "B" Mooring Hardware for Aids to Navigation – Technical Specification and Annex "C" Serrated Cast Iron Anchors & Sinkers – Technical Specification, to CCG St. John's Base, Newfoundland, CCG Dartmouth Base, Nova Scotia and CCG Charlottetown Base, Prince Edward Island for the Canadian Coast Guard (CCG), Department of Fisheries and Oceans.

6.3 Standard Clauses and Conditions

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

6.3.1 General Conditions

[2010A](#) (2018-06-21), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.4 Term of Contract

6.4.2 Delivery Date

All the deliverables must be received on or before _____. **(To be inserted upon Contract Award).**

6.4.3 Delivery Points

Delivery of the requirement will be made to delivery points specified at Annex "D" Basis of Payment of the Contract. Items numbered:

- 1 to 28 must be delivered to Location 1, CCG Base St. John's
- 29 to 48 must be delivered to Location 2, CCG Base Dartmouth
- 49 to 79 must be delivered to Location 3, CCG Base Charlottetown

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Michelle Roberge-Butcher
Title: Intern Officer
Directorate: Public Works and Government Services Canada
Defence and Marine Procurement Branch
Marine Services and Small Vessel Sector
Refit, Logistic and Small Vessels Construction Directorate
Machinery and Logistics Support Division
Address: 11 Laurier Street
Place du Portage III, 6C2
Gatineau, Québec
K1A 0S5
Telephone: (873) 469-3524
Facsimile: (819) 956-0897
E-mail address: Michelle.Roberge-Butcher@tpsgc-pwgsc.gc.ca

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

6.5.2 Technical Authority

The Technical Authority for the Contract is **(To be inserted at Contract Award)**:

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: _____
Facsimile: _____
E-mail: _____

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Buyer ID - Id de l'acheteur
062ml
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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.

6.5.3 Project Authority

The Project Authority for the Contract is **(To be inserted at Contract Award)**:

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: _____
Facsimile: _____
E-mail: _____

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

6.5.4 Contractor's Representative

The Contractor's Representative for the Contract is: **(Bidder to complete)**

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: _____
Facsimile: _____
E-mail: _____

6.6 Payment

6.6.1 Basis of Payment – Firm Unit Prices

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex "D" Basis of Payment, for a total cost of \$_____ **(to be completed upon Contract Award)**. Customs duties are included and Applicable Taxes are extra.

6.6.2 Limitation of Price

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

6.6.3 Multiple Payments

SACC Manual clause [H1001C](#) (2008-05-12), Multiple Payments

6.6.4 Taxes – Foreign-based Contractor (if applicable)

SACC Manual clause [C2000C](#) (2007-11-30), Taxes – Foreign-based Contractor

6.6.5 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)

6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - a. The original and one (1) copy must be forwarded to the following address for certification and payment:

To be inserted at Contract Award

- b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Certifications and Additional Information

6.8.1 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.

6.8.2 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.

6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (**To be inserted at Contract Award**).

6.10 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2010A (2018-06-21), General Conditions - Goods (Medium Complexity);
- (c) Annex "A", Requirement;
- (d) Annex "B", Technical Specification – Mooring Hardware for Aids to Navigation;
- (e) Annex "C", Technical Specification – Serrated Cast Iron Anchors & Sinkers;
- (f) Annex "D", Basis of Payment;
- (g) the Contractor's bid dated _____ (**To be inserted at Contract Award**)

6.11 SACC Manual Clauses

B7500C (2006-06-16), Excess Goods
D2025C (2017-08-17), Wood Packaging Materials
D9002C (2007-11-30), Incomplete Assemblies
G1005C (2016-01-28), Insurance - No Specific Requirement

6.12 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and Delivered Duty Paid (DDP) to destination, Incoterms 2010.

6.13 Delivery Instructions

1. The Contractor must deliver the goods by appointment only. The Contractor or its carrier must arrange delivery appointments by contacting the designated contact person. The consignee may refuse shipments when prior arrangements have not been made.
2. Delivery trucks must be equipped with an unloading device which will permit unloading at sites with no hydraulic, stationary or other type of unloading facility.
3. When making deliveries, sufficient personnel must be provided to permit unloading of any type of vehicle without the assistance of federal government personnel.
4. At some sites, the delivery truck must be unloaded while parked at the curb. When material is placed on the sidewalk, it must be placed in proximity to the designated entrance so as to be readily accessible to transport by mechanical handling equipment utilized by site personnel.

6.14 Inspection and Acceptance

The Technical Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection

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Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

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ANNEX "A"

REQUIREMENT

Section 1 Introduction

1.1 Background

The Canadian Coast Guard (CCG) requires mooring hardware, as well as serrated anchors and sinkers, to support its short-range Aids to Navigation Program. While not an exhaustive list, mooring hardware consists of open-link, welded chain; shackles; swivels; counterweights; bridle assemblies; and other combinations thereof. Mooring hardware will be paired with the anchors and sinkers to hold the position of navigation buoys. Fulfillment of this requirement will help to ensure safe and effective vessel transit in Canadian waters.

1.2 Scope

This Requirement defines the supply and delivery of mooring hardware, as well as anchors and sinkers, for navigation buoys.

Annex “B” defines the technical requirements for mooring hardware; Annex “C” defines the technical requirements for anchors and sinkers.

Additional information pertaining to the required quantities and delivery locations, is included in Annex “D” Basis of Payment.

Section 2 Contract Management

2.1 Kickoff Meeting

The Contractor must convene and co-chair a kickoff meeting within 10 business days of Contract award. The kickoff meeting will be conducted via teleconference. For planning purposes, this meeting is not expected to last longer than 2 hours.

At a minimum, the following documents will be reviewed at the kickoff meeting:

- a) Contract (including Annex “A”, Annex “B”, Annex “C” and Annex “D”); and
- b) Proposed format for the requested certification.

To facilitate review, the Contractor must provide a soft copy of the proposed certification format at least 3 business days prior to the kickoff meeting to the Technical Authority and Contracting Authority.

The Contractor must provide Canada with the kickoff meeting minutes for review and acceptance, no more than 3 business days after the kickoff meeting occurs. At a minimum, these minutes must include the following information:

- a) A list of attendees;
- b) Narrative summation of each issue discussed;
- c) List of action items, if any; and
- d) A schedule of all planned activities.

2.2 Shipment Reporting

The Contractor must notify Canada, in writing, 5 business days prior to each shipment leaving the Contractor’s or manufacturer’s facility. This written notification must be provided electronically. As part of this notification, the Contractor must specify an estimated delivery window to each delivery location, and provide some means to track each shipment during transit (e.g. International Maritime Organization number, freight tracking number).

2.3 Problem Reporting

The Contractor must notify Canada upon identifying or being informed of any issue that may impact the successful execution of Contract work. The Contractor must document this issue in writing within 2 business days of identification, and provide this discourse to Canada electronically. This written discourse must also establish the appropriate measure(s) that the Contractor will use to mitigate the overall risk to the Contract work.

Section 3 Testing and Inspection

3.1 General Considerations

The Contractor must ensure that all tests and inspections defined in Annex “B” and Annex “C” are conducted prior to shipment.

The Contractor must notify Canada of each mooring hardware production run, and anchor and sinker production run at least 10 business days prior to the run. The Contractor must invite Canada to witness each production run, and the accompanying tests and inspections.

3.2 Documentation

The Contractor must provide Canada with all pertinent documentation defined in Annex “B” and Annex “C”.

For reference, this documentation includes, but is not limited to:

- a) Material and mill certificates;
- b) Mechanical properties testing;
- c) Drop test and hammer blow test results; and
- d) Dimensional and mass inspection results (whereby actual measured values, nominal values, and variance are verified against Annex “B” and Annex “C” requirements).

All documentation must be provided electronically to Canada prior to the departure of each shipment. Hardcopies of all documentation must also be included with each shipment.

All mooring hardware, and anchors and sinkers are subject to final inspection and acceptance by Canada upon receipt. Final inspections are not intended to limit or replace the testing and inspections required by the Contractor to ensure quality product.

Section 4 Shipping and Packaging

4.1 General Considerations

All goods must be preserved and packaged in such a way as to ensure complete delivery at destination, without damage or deterioration from shipping, handling, or storage hazards. The Contractor must provide Canada with a hardcopy of the bill of lading.

Chains having a bar diameter larger than 26 mm must be bundled with wire rope or bundling chain of sufficient size and strength to ensure safe handling and delivery; all other mooring hardware must be packaged in a flexible, intermediate bulk container. All bundling material and containers, as used, will become the property of Canada.

Each shipment must be packaged to facilitate safe unloading at destination with standard lifting equipment (i.e., forklifts and overhead cranes). No container must exceed a weight of 2.5 metric tonnes.

4.2 Marking

All chain bundles and containers must be fitted with metal shipping tags indicating the following information:

- a) Name and address of both the consignee and the Contractor;
- b) Contract number;
- c) Contents, including type, size, CCG catalogue number, and grade of material; and
- d) Quantity.

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ANNEX "B"

MOORING HARDWARE FOR AIDS TO NAVIGATION – TECHNICAL SPECIFICATION

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Section 1 General

1.1 Purpose

- 1.1.1 This specification states the requirements of the Department of Fisheries and Oceans, Canadian Coast Guard for steel chain and Mooring Hardware for use on buoys for marine navigational purposes.
- 1.1.2 Mooring hardware is defined as standard chain links, standard end links, long chain links, bridle rings, sinker/anchor links, shackles, swivels, counterweights, bridle assemblies, and all combinations thereof.

1.2 Priority of Documents

- 1.2.1 In the event of any conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document supersedes applicable laws and regulations unless a specific exemption has been made.

1.3 Reference Documents

- 1.3.1 The document listed in Table 1 forms a part of this Technical Specification to the extent referenced herein. While every effort has been made to ensure completeness of the list, the Contractor must meet all specified requirements cited in this Technical Specification.

Table 1 Referenced Standards

Source	Document	Version
Lloyd's Register (LR)	<i>Rules and Regulations for the Classification of Ships / Part 2 Rules for the Manufacture, Testing and Certification of Materials,</i> referred herein as LR Rules Part 2.	July 2018
ASTM International (ASTM)	ASTM A48/A48M – Standard Specification for Gray Iron Castings, referred herein as ASTM A48.	2003 (Reapproved 2016)

1.4 Technical Data Sheets

- 1.4.1 The mooring hardware must be sized and formed in accordance with the relevant Technical Data Sheets (TDS) of Appendix A.

Section 2 Requirements

2.1 General

- 2.1.1 All the mooring hardware must be manufactured in accordance with the requirements of this Technical Specification.
- 2.1.2 All mooring hardware must be manufactured in accordance with the LR Rules Part 2 (Chapter 10 Section 2).
- 2.1.3 Accordingly, all mooring hardware must be manufactured by a Lloyd's Register Approved Manufacturer of Cable and Fittings for Cable, being approved for Grade U2 chain cable and fittings.

2.2 Materials

- 2.2.1 All materials used in the manufacture of mooring hardware, except for the shackle cotter key and counterweight castings, must be of uniform quality Grade U2 steel and must comply with LR Rules Part 2 (Chapter 3 Section 9 and Chapter 10 Section 2).

2.3 Dimensions and Tolerances

- 2.3.1 All mooring hardware must conform to the shapes, dimensions and tolerances shown on the TDS (Appendix A).

2.4 Markings

- 2.4.1 All mooring hardware must be stamped with the following identification marks:
- Contractor ID (ABCD);
 - Year of Manufacture (e.g. 2018);
 - Steel grade (U2)
- 2.4.2 Unless otherwise specified by Canada, markings must be legibly and permanently stamped with 5 mm high lettering in Bold Arial Font.
- 2.4.3 Unless otherwise specified by Canada, markings must be stamped on each End-link of Chain assemblies, Y and V Bridle assemblies, Counterweights, Swivels and on the Shackle assemblies.

2.5 Mooring Hardware Assemblies

- 2.5.1 Unless otherwise specified by Canada, all standard chain link assemblies, including swivels, shackles and bridles, must be delivered to Canada fully assembled and fitted with the corresponding end links specified in Appendix A.

2.6 Swivels

- 2.6.1 Swivels must be formed by upset forging and welding a solid sleeve onto the swivel pin.
- 2.6.2 Welded swivel design and fabrication process must conform to the LR Rules Part 2.

2.6.3 Swivels must rotate freely.

2.6.4 Swivels must not be made using a threading nor a pinning manufacturing process.

2.7 *Shackles*

2.7.1 Shackles must not be made with a welded pin construction.

2.8 *Counterweights*

2.8.1 All cast iron used for counterweights must be in conformance to ASTM A48/A48M – Standard Specification for Gray Iron Castings.

2.9 *Cotter Keys*

2.9.1 Cotter Keys must be made from Stainless Steel type 316.

2.10 *Finish*

2.10.1 All burrs must be removed.

2.10.2 All exposed edges must be trimmed or rounded to a radius of 3-4 mm.

2.11 *Mechanical Strength*

2.11.1 All mooring hardware must be capable of withstanding the proof loads as specified in Appendix A for respective mooring hardware components without rupture and/or deformation, as per the LR Rules Part 2.

2.11.2 All mooring hardware must be capable of withstanding the breaking loads of shown in Appendix A for each mooring hardware component for a minimum of 30 seconds without rupture, as per the LR Rules Part 2.

Section 3 Quality Assurance, Inspection and Testing

3.1 *General*

- 3.1.1 All quality assurance inspection and testing must be done in accordance with LR Rules Part 2.
- 3.1.2 The results of all the tests and inspections described in this section must be available upon request by Canada.

3.2 *Inspection and Testing*

- 3.2.1 Mechanical properties testing must be carried out by the Contractor on mooring hardware components and on the shackle assembly in accordance with the LR Rules part 2 (Chapter 10 Section 2).
- 3.2.2 All mooring hardware must be Proof Load and Breaking Load tested and passed in accordance with the LR Rules Part 2 (Chapter 10 Section 2).
- 3.2.3 A dimensional inspection must be performed by the Contractor on 10% of each batch of all mooring hardware in accordance with the LR Rules Part 2 (Chapter 10 Section 2). The results of this inspection must include measured values and variance, and must be delivered to Canada upon request.

3.3 *Certificate*

- 3.3.1 All mooring hardware must be certified in accordance with the requirements of LR Rules Part 2 (Chapter 10 Section 2).
- 3.3.2 In accordance with the LR Rules Part 2, the Contractor must confirm by issuance to Canada of a certificate issued by Lloyds Register that all mooring hardware conforms to this Technical Specification and referenced standards.
- 3.3.3 The certificate must also include the following information for all mooring hardware:
 - 1. Contractor's name;
 - 2. Date of issuance;
 - 3. Description and dimensions;
 - 4. Identification mark;
 - 5. Details of heat treatment;
 - 6. Mechanical properties testing on specimen, which include:
 - a. Mechanical test results (yield stress, tensile strength, elongation and Charpy V-notch impact tests), as per Section 3.2.2
 - b. Grade of steel and chemical composition.
 - c. Brinell Hardness Test Report

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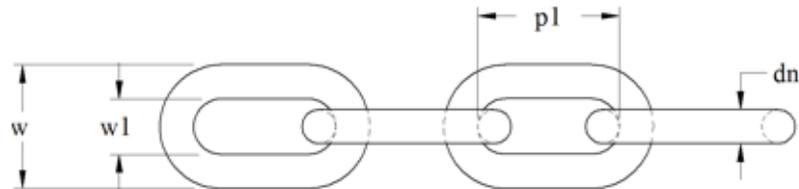
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d. Tensile Test Report / Certificate

7. Proof load and Breaking load test results, as per Section 3.2.3;
8. Dimensional inspection results, as per Section 3.2.4.

APPENDIX A TECHNICAL DATA SHEETS (TDS)

TDS #	Description
101	Standard Chain
102	Standard Chain End Link
103	Long Link Chain
104	Bridle Ring
105	Sinker / Anchor Link
301	Bridle Shackle
302	Bow Shackle
401	Clinch Shackle
501	Swivel
701	Counterweight
801	'V' Bridle Assembly
901	'Y' Bridle Assembly

Mooring Hardware

		Standard Chain						
		Dimension (mm)				Proof and Breaking Loads (kN)		
Maximo Number	Catalog Number	Bar Diameter	Pitch of Chain	Inside Width	Outside Width	Safe Working Load	Proof Load	Breaking Load
		dn	p1	w1	w(ref)			
NA515847	101-14	14	56	20	48	18	45	90
	101-16	16	64	22	54	24	60	120
NA515852	101-20	20	80	28	68	37	93	185
NA515853	101-26	26	104	36	88	62	155	310
NA515855	101-32	32	128	45	109	93	233	465
	101-38	38	152	53	129	130	325	650
NA515856	101-44	44	176	62	150	172	430	860
	101-50	50	200	70	170	220	550	1100

Dimensional Notes:

- Fabrication tolerances dimensions: $\pm 2.5\%$
All measurements are to be taken after proof testing.

Material Notes:

- Remove all sharp edges and burrs
- All links shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.

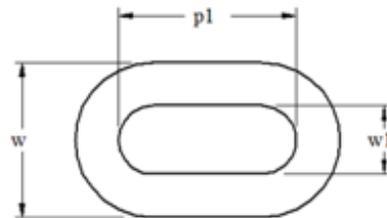
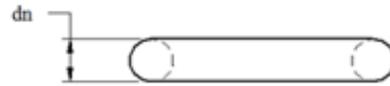
TECHNICAL DATA SHEET**Standard Chain**

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Mooring Hardware



Standard Chain End Link									
Dimensions (mm)							Proof and Breaking Loads (kN)		
Maximo Number	Catalog Number	For use with chain diameter	Bar Diameter	Pitch of Chain	Inside Width	Outside Width	Safe Working Load	Proof Load	Breaking Load
			dn	p1	w1	w(ref)			
	102-18	14	18	72	23	59	18	45	90
	102-20	16	20	80	26	66	24	60	120
	102-24	20	24	96	31	79	37	93	185
	102-32	26	32	128	42	106	62	155	310
	102-38	32	38	152	49	125	93	233	465
	102-46	38	46	184	60	152	130	325	650
	102-53	44	53	212	69	175	172	430	860
	102-60	50	60	240	78	198	220	550	1100

Dimensional Notes:

- Fabrication tolerances dimensions: $\pm 2.5\%$
- All measurements are to be taken after proof testing.

Material Notes:

- Remove all sharp edges and burrs
- All links shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.

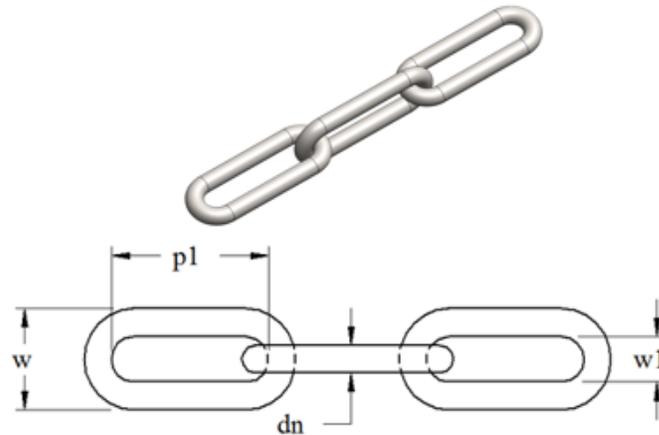
TECHNICAL DATA SHEET

Standard Chain End-Link

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Mooring Hardware

		Long Link Chain						
		Dimensions (mm)				Proof and Breaking Loads (kN)		
Maximo Number	Catalog Number	Bar Diameter	Pitch of Chain	Inside Width	Outside Width	Safe Working Load	Proof Load	Breaking Load
		dn	p1	w1	w (ref)			
NA523113	103-14	14	98	20	48	18	45	90
	103-20	20	140	28	68	37	93	185
NA523114	103-26	26	182	36	88	62	155	310
NA523115	103-32	32	224	45	109	93	233	465
NA523110	103-38	38	266	53	129	130	325	650
	103-44	44	308	62	150	172	430	860
	103-50	50	350	70	170	220	550	1100

Dimensional Notes:

- Fabrication tolerances dimensions: $\pm 2.5\%$
- All measurements are to be taken after proof testing.

Material Notes:

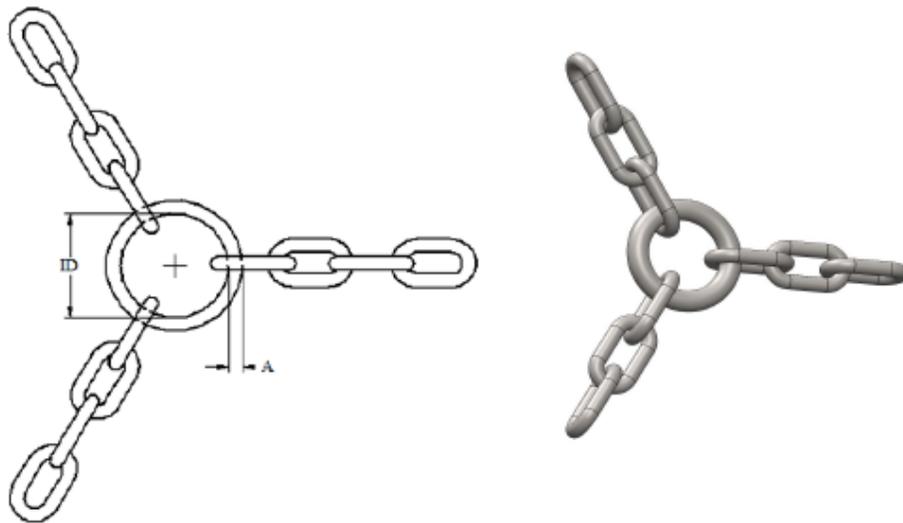
- All links shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.

TECHNICAL DATA SHEET**Long Link Chain**

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Mooring Hardware

Bridle Ring							
Dimensions (mm)					Proof and Breaking Loads (kN)		
Maximo Number	Catalog Number	For use with chain diameter	Bar Diameter	Inside Ring Diameter	Safe Working Load	Proof Load	Breaking Load
			A	ID			
	104-20	14	20.0	70	18	45	90
	104-28	20	28.0	100	37	93	185
	104-36	26	36.0	130	62	155	310
	104-45	32	45.0	160	93	233	465
	104-53	38	53.0	190	130	325	650
	104-62	44	62.0	220	172	430	860
	104-70	50	70.0	250	220	550	1100

Dimensional Notes:

- Fabrication tolerances dimensions: $\pm 2.5\%$

All measurements are to be taken after proof testing.

- kN = Kilonewton

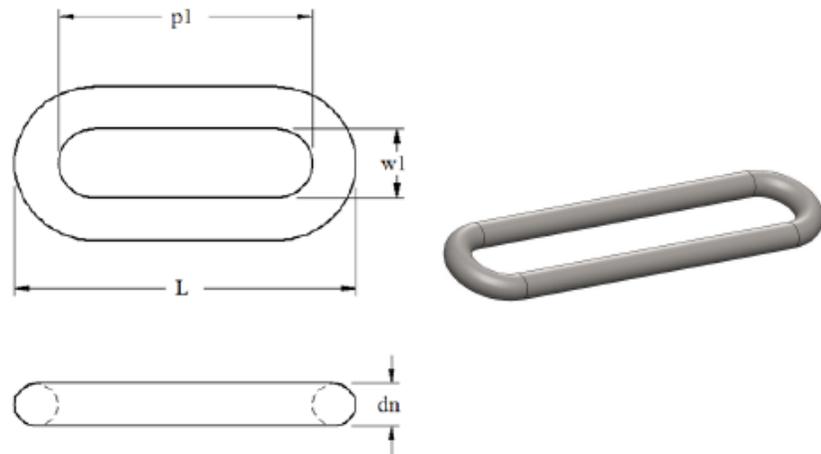
Material Notes:

- All links shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.

TECHNICAL DATA SHEET**Bridle Ring**

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Mooring Hardware



		Sinkers/Anchor Link						
		Dimensions (mm)				Proof and Breaking Loads (kN)		
Maximo Number	Catalog Number	Bar Diameter	Pitch	Inside Width	Outside Length	Safe Working Load	Proof Load	Breaking Load
		dn	p1	w1	L (ref)			
	105-14	14	140	38	168	18	45	90
	105-26	26	250	80	302	62	155	310
	105-32	32	380	76	444	93	233	465
	105-38	38	350	100	426	130	325	650
	105-44	44	565	100	653	172	430	860
	105-50	50	600	120	700	220	550	1100
	105-60	60	835	120	955	310	775	1550

Dimensional Notes:

- Fabrication tolerances dimensions: $\pm 2.5\%$
- All measurements are to be taken after proof testing.

Material Notes:

- All links shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.

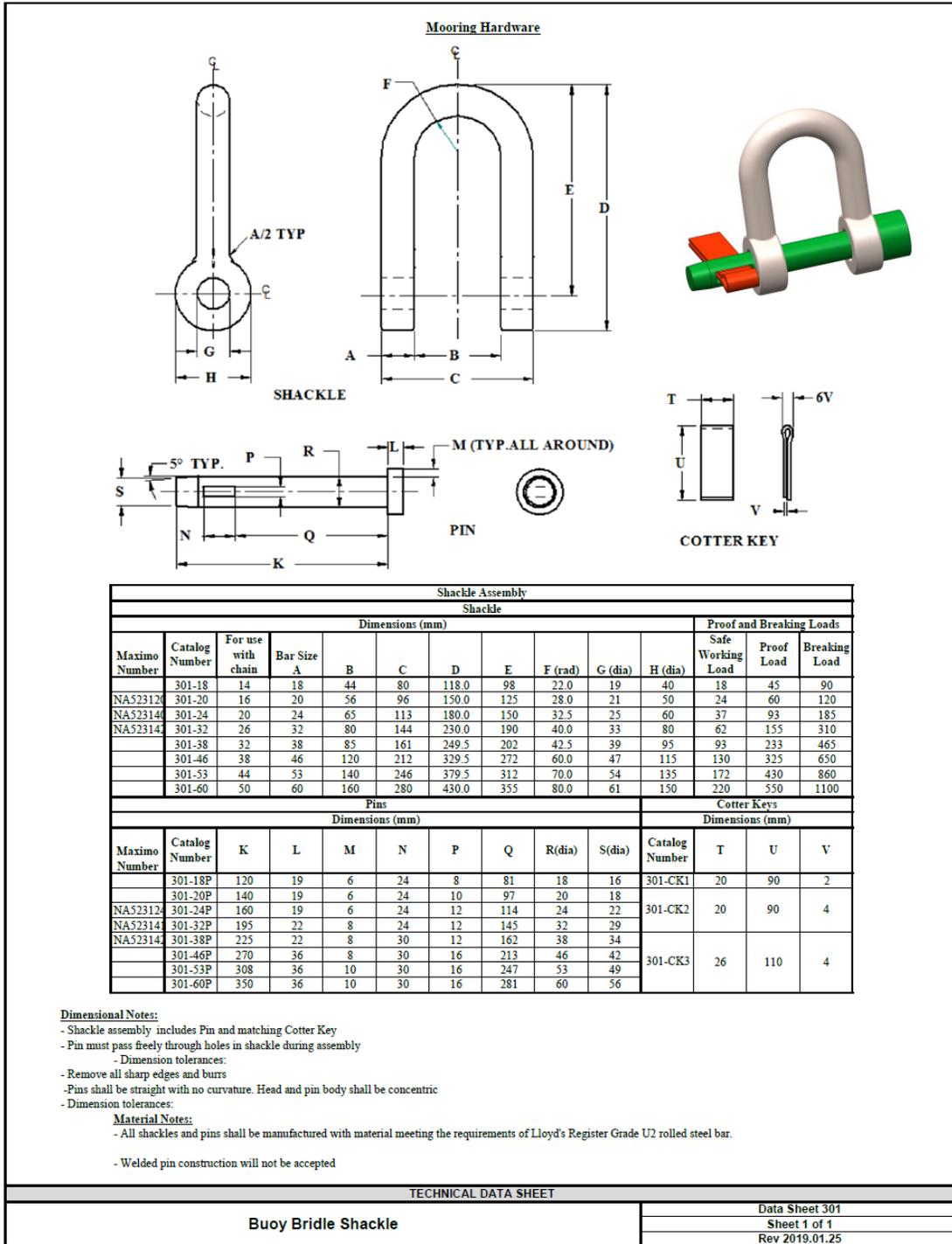
TECHNICAL DATA SHEET

Sinker/Anchor Link

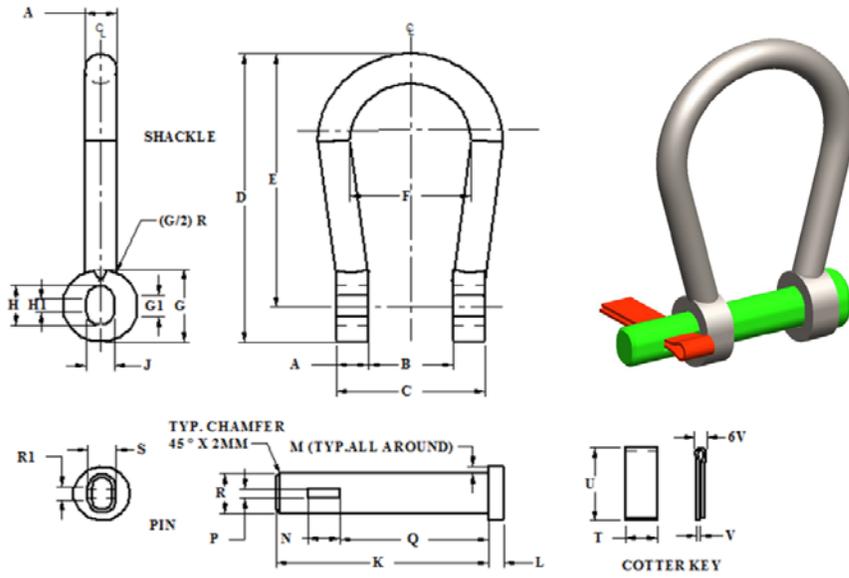
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Mooring Hardware



Shackle Assembly																	
Shackle																	
Dimensions (mm)														Proof and Breaking Loads (kN)			
Maximo Number	Catalog Number	For use with chain diameter	Bar Size	A	B	C	D	E	F	G	G1	H	H1	J	Safe Working Load	Proof Load	Breaking Load
NA523145	302-18	14	18	54	90	200	178	94	44	6	26	5	21	18	45	90	
NA523148	302-20	16	20	58	98	250	226	98	48	6	28	5	23	24	60	120	
NA523150	302-24	20	24	62	110	260	226	100	50	6	29	5	24	37	93	185	
	302-26	-	26	60	114	264	237	100	54	6	32	5	27	43	108	216	
NA523151	302-32	26	32	56	120	272	240	100	64	6	37	6	31	62	155	310	
NA523152	302-38	32	38	64	140	320	281	105	78	13	48	13	35	93	233	465	
	302-46	38	46	58	150	340	294	105	92	19	59	19	40	130	325	650	
	302-53	44	53	64	170	380	326	110	108	21	66	21	45	172	430	860	
	302-60	50	60	70	190	430	367	110	126	24	78	24	54	220	550	1100	

Pins											Cotter Keys					
Dimensions (mm)											Dimensions (mm)					
Maximo Number	Catalog Number	K	L	M	N	P	Q	R	R1	S	Catalog Number	T	U	V		
	302-18P	135	12	6	24	8	91	25	5	20	302-CK1	20	90	2		
NA523148	302-20P	140	12	6	24	8	99	27	5	22						
NA523151	302-24P	160	12	6	30	10	110	28	5	23						
	302-26P	164	12	6	30	10	113	30	5	26	302-CK2	26	110	3		
NA523152	302-32P	170	12	8	30	10	121	36	6	30						
	302-38P	190	12	8	30	10	141	47	13	34	302-CK3	32	140	4		
	302-46P	205	19	8	36	12	151	58	19	39						
	302-53P	225	19	10	36	12	171	65	21	44						
	302-60P	250	19	10	36	12	191	77	24	53						

Dimensional Notes:

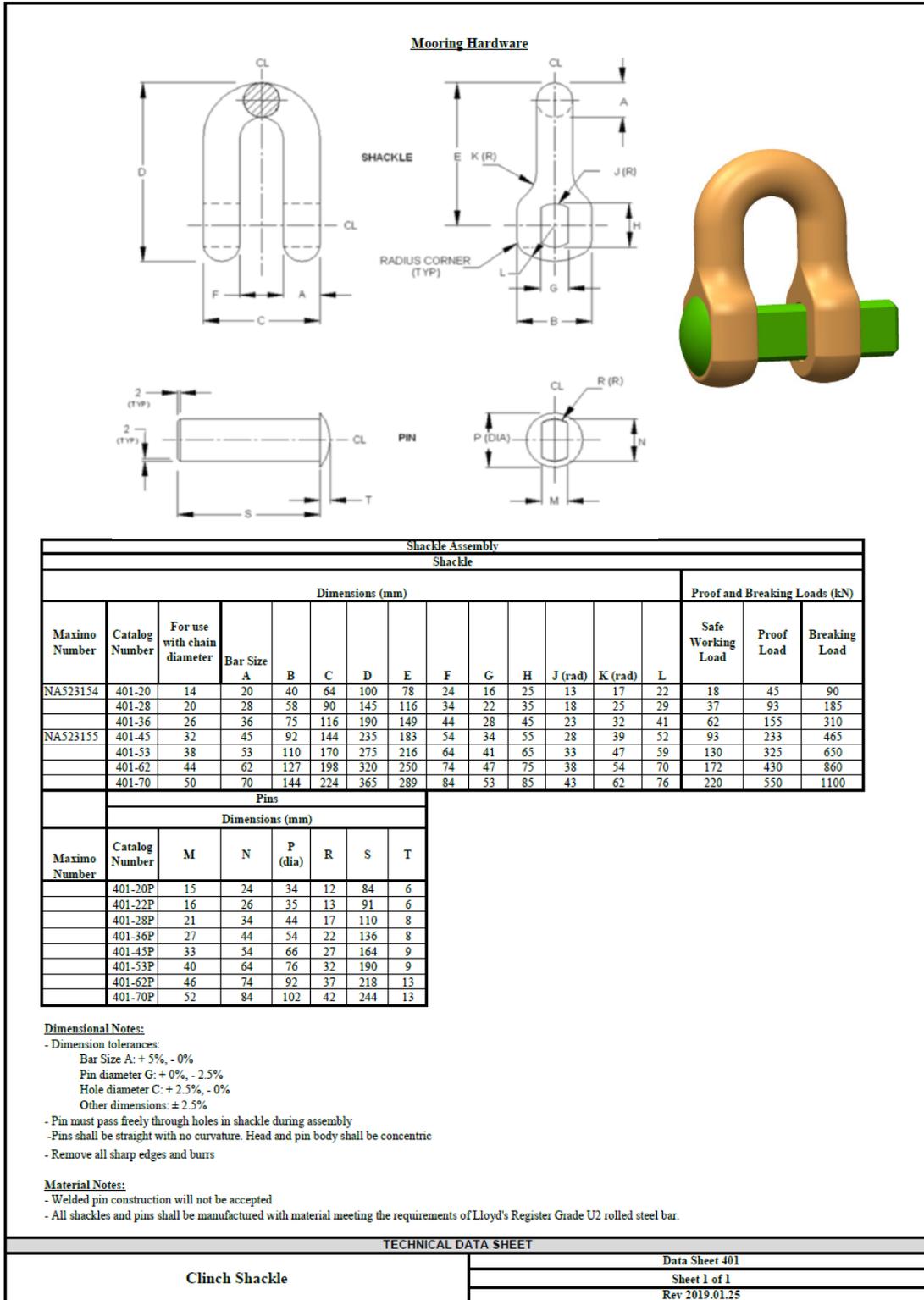
- Shackle assembly includes Pin and matching Cotter Key
- Dimension tolerances:
 - Bar Size A: + 5%, - 0%
 - Pin diameter G: + 0%, - 2.5%
 - Hole diameter C: + 2.5%, - 0%
 - Other dimensions: ± 2.5%
- Pin must pass freely through holes in shackle during assembly
- Remove all sharp edges and burrs
- Pins shall be straight with no curvature. Head and pin body shall be concentric

Material Notes:

- All shackles and pins shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.
- Welded pin construction will not be accepted

TECHNICAL DATA SHEET

Bow Shackle	Data Sheet 302
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Mooring Hardware

END LINK (REFERENCE) ASSEMBLY TO BE COMPLETE WITH AN END LINK AT EACH END END LINK (REFERENCE)

Swivel Assembly									
Swivel									
Dimensions (mm)									
Maximo Number	Catalog Number	For use with chain diameter	A	B	C	D	E	F	G
	501-18	14	17	137	66	48	20	20	15
NA523157	501-20	16	19	155	75	54	22	22	18
	501-24	20	24	194	94	68	28	28	22
NA523158	501-32	26	31	252	122	88	36	36	29
	501-38	32	38	310	150	109	45	45	35
	501-46	38	46	369	179	129	53	53	42
	501-53	44	53	427	207	150	62	62	48
	501-60	50	60	486	235	170	70	70	55

Dimensions (mm)							Proof and Breaking Loads (kN)		
Maximo Number	Catalog Number	H	I	J	K	L	Safe Working Load	Proof Load	Breaking Load
	501-18	17	28	25	47	48	18	45	90
	501-20	19	32	28	54	54	24	60	120
	501-24	24	40	35	67	68	37	93	185
	501-32	31	52	46	87	88	62	155	310
	501-38	38	64	56	107	109	93	233	465
	501-46	46	76	67	127	129	130	325	650
	501-53	53	88	77	147	150	172	430	860
	501-60	60	100	88	168	170	220	550	1100

Dimensional Notes:

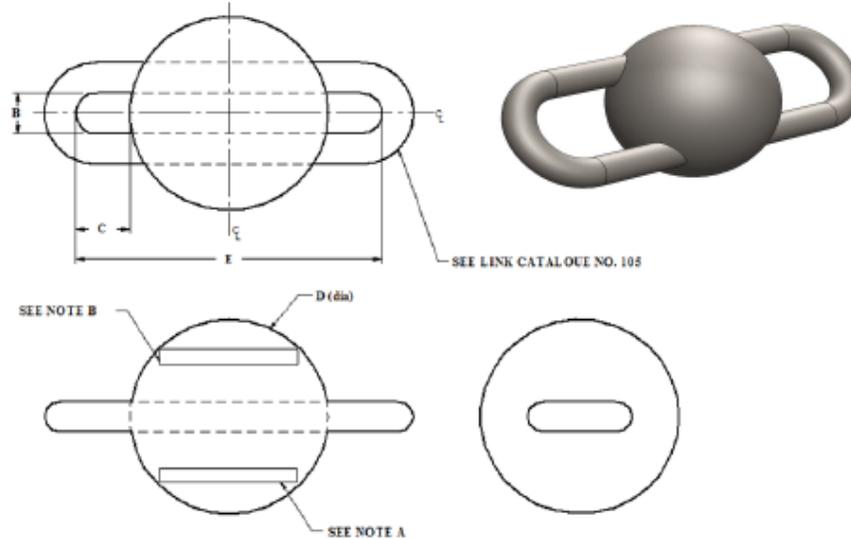
- Swivel assembly includes two installed end links.
- Dimension tolerances:
 - Bar Size A: + 5%, - 0%
 - Other dimensions: ± 2.5%
- All Endlinks to conform to Catalogue Number 102.

Material Notes:

- The swivel and all links shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.
- Clearance between eyepiece and swivel shall not exceed 1 mm
- The swivel pin is to be formed by Upsetting or Forged with Eye-Piece. Threading and Pinning will not be acceptable.
- Remove all sharp edges and burrs

TECHNICAL DATA SHEET	
Swivel Assembly	Data Sheet 501
	Sheet 1 of 1
	Rev 2019.01.25

Mooring Hardware



Maximo Number	Catalog Number	Weight (kg)	Dimensions (mm)				
			Link Catalog No.	B	C	D (ref)	E
NA515861	701-0025	25	105-32	76	103.0	174	380
NA515868	701-0050	50			75.0	230	
NA515870	701-0075	75	105-44	100	156.5	252	565
NA515873	701-0100	100			140.0	285	
NA515875	701-0200	200			97.5	370	
NA515876	701-0400	400			186.5	462	
NA515879	701-0750	750	105-60	100	127.5	580	835
NA515880	701-1000	1000			96.5	642	

Dimensional Notes:

- Dimension tolerances:
 - Bar Size A: + 5%, - 0%
 - Weight Tolerance: + 5.0%, - 2.5%
 - Other dimensions: ± 2.5%

Material Notes:

- The link shall be manufactured with material meeting the requirements of Lloyd's Register Grade U2 rolled steel bar.
- The balls shall be manufactured with cast iron
- Note A: Manufacturer ID (ABCD),Batch Number (BN (XXXX)) and Year Date (ex. 2010) in raised cast lettering 25 mm.
- Note B: Mass given in Kilograms in raised cast letters 50 mm high.
- All dimensions to be symmetrical about center lines.

TECHNICAL DATA SHEET

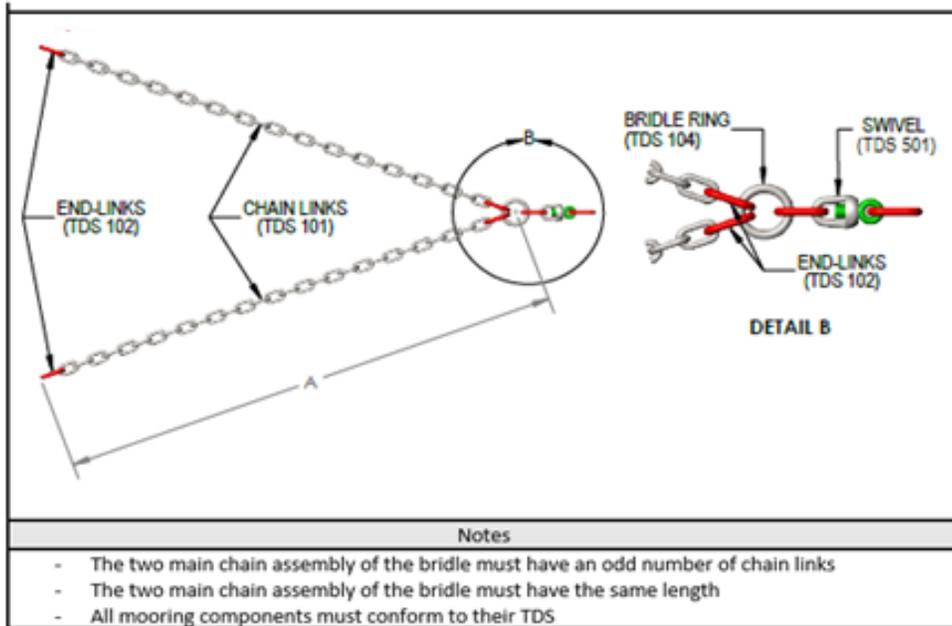
Counterweight

Data Sheet 701

Sheet 1 of 1

Rev 2019.01.25

Mooring Hardware



Maximo Number	Catalog Number	A (m)	Chain link	End Link.	Bridle Ring	Swivel
	801-1	4	101-38	102-46E	104-53	501-46

Dimensional Notes:

- Dimension tolerances:
 - Bar Size A: + 5%, - 0%
 - Weight Tolerance: + 5.0%, - 2.5%
 - Other dimensions: ± 2.5%

Material Notes:

- Note: All material must meet the requirements of Lloyds registry grade U2 rolled steel bar.
- All dimensions to be symmetrical about center lines.

TECHNICAL DATA SHEET

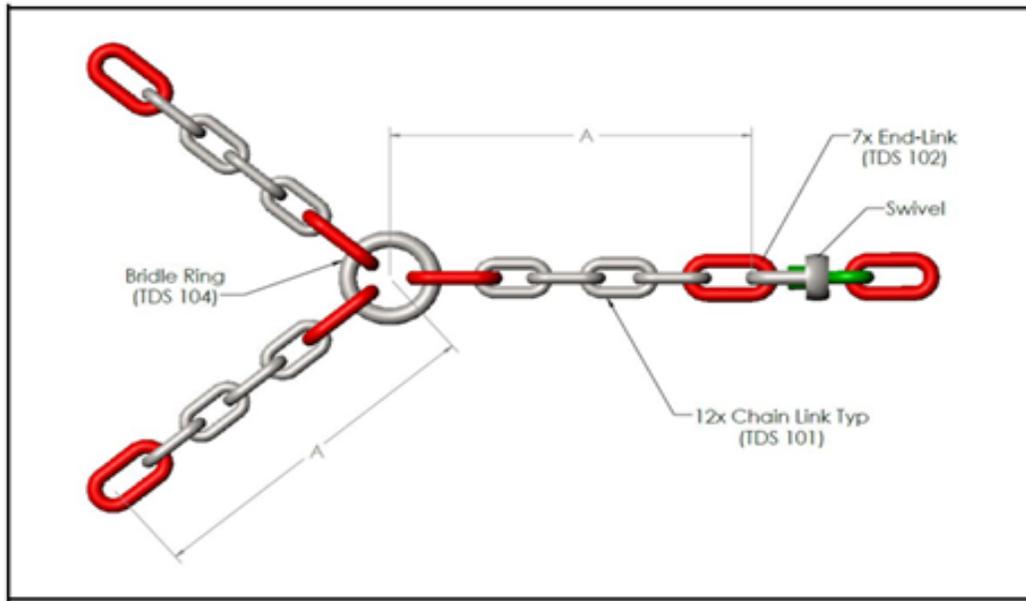
'V' Bridle Assembly

Data Sheet 801

Sheet 1 of 1

Rev 2019.01.25

Mooring Hardware



Notes

- All mooring components must conform to their TDS

Maximo Number	Catalog Number	A (m)	Chain link	End Link.	Bridle Ring	Swivel
	901-1	3	26	102-32E	104-36	501-32
	901-2	4.5	32	102-38E	104-45	501-38
	901-3	3	38	102-46E	104-53	501-46
	901-4	4	38	102-46E	104-53	501-46

Dimensional

- Dimension tolerances:

Bar Size A: + 5%, - 0%

Weight Tolerance: + 5.0%, - 2.5%

Other dimensions: ± 2.5%

Material Notes:

-Note: All material must meet the requirements of Lloyds registry grade U2 rolled steel bar.

TECHNICAL DATA SHEET

'Y' Bridle Assembly

Data Sheet 901

Sheet 1 of 1

Rev 2019.01.25

Solicitation No. - N° de l'invitation
F7047-180145/A
Client Ref. No. - N° de réf. du client
F7047-180145

Amd. No. - N° de la modif.
File No. - N° du dossier
062ml.F7047-180145

Buyer ID - Id de l'acheteur
062ml
CCC No./N° CCC - FMS No./N° VME

ANNEX "C"

SERRATED CAST IRON ANCHORS & SINKERS – TECHNICAL SPECIFICATION

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Section 1 General

1.1 Purpose

This Technical Specification states the requirements of the Department of Fisheries and Oceans, Canadian Coast Guard (CCG) for serrated cast iron anchors and sinkers, hereinafter referred to as anchors and sinkers. These anchors and sinkers will be used to hold the position of navigation buoys.

1.2 Reference Documents

The document listed in Table 1 forms a part of this specification to the extent referenced herein. While every effort has been made to ensure completeness of the list, the Contractor must meet all specified requirements cited in this specification.

Table 2: Referenced Standards

Source	Document	Version
Lloyd's Register (LR)	Rules and Regulations for the Classification of Ships, Part 2: Rules for the Manufacture, Testing and Certification of Materials, referred herein as LR Rules Part 2 .	July 2018
ASTM International (ASTM)	ASTM A48/A48M – Standard Specification for Gray Iron Castings, referred herein as ASTM A48 .	2003 (Reapproved 2016)

1.3 Reference Drawings

The anchors and sinkers must be sized and formed in accordance with the following applicable Drawings:

- Appendix A: HM00002-E010-DO: CCG Serrated Sinkers; and
- Appendix B: HM00001-E010-DO: CCG Serrated Anchors.

Section 2 Requirements

2.1 General

- 9.1.1 All anchors and sinkers must be manufactured in accordance with LR Rules Part 2.
- 9.1.2 All anchors and sinkers must consist of a main cast body, and a cold rolled steel lifting link in accordance with the Drawings (Appendix A and B).

2.2 Materials

- 9.2.1 Each anchor and sinker body must be made from one uniform, continuous pour of grey cast iron conforming to LR Rules Part 2 (Chapter 7, Sections 1 and 2) or ASTM A48 (Class No. 200B).
- 9.2.2 With the exception of the lifting link, no other wrought steel structural shapes or foreign material must be introduced during the casting process.
- 9.2.3 Each lifting link must be made from new, U2 steel round bar material conforming to LR Rules Part 2 (Chapter 3, Section 9).

2.3 Dimensions and Tolerances

All anchors and sinkers must conform to the shapes, dimensions, and tolerances shown on the Drawings (Appendix A and B of this Annex).

2.4 Anchor and Sinker Lifting Link

- 9.4.1 The lifting link must conform to the dimensions and tolerances shown on the Drawings (Appendix A and B).
- 9.4.2 The lifting link must be cast into the anchor or sinker body so that the body and lifting link form a single unit.
- 9.4.3 Any welding of the lifting link must be done in accordance with LR Rules Part 2.

2.5 Weight

The weight of each anchor and sinker must conform to the tolerances indicated on the Drawings (Appendix A and B).

2.6 Markings

- 9.6.1 The following markings must be cast into the anchor or sinker body in raised block letters:
- a. Anchor weight (e.g., 3500 kg or 4000 kg);
 - b. Contractor identifier (e.g., ABCD);
 - c. Batch number (BN: XXXX); and
 - d. Year of manufacture (e.g., 2019).
- 9.6.2 All markings must be in bold Arial font type, as indicated on the Drawings.
- 9.6.3 Painting or stenciling of the markings is prohibited.

2.7 Heat Treatment

9.7.1 A thermal history report containing as minimum the temperature and duration during heat treatment must be produced for each batch. A batch consists of a maximum 25 anchors or sinkers.

9.7.2 All heat treatments must be carried out in accordance with LR Rules Part 2.

9.7.3 The lifting link must be evenly heated to 200°C prior to the pouring of the grey cast iron, so no undue shrinkage stresses can arise in the cast iron.

Section 3 Quality Assurance, Inspection, and Testing

3.1 General

10.1.1 All quality assurance inspection and testing must be done in accordance with LR Rules Part 2.

10.2.1 The Contractor must correct all defects found during these inspections and tests.

3.2 Workmanship and Finish

10.2.1 All anchors and sinker surfaces must be free of adhering sand, scale, and all other foreign material.

10.2.2 All anchor and sinker surfaces must be free of cracks and hot tears.

10.2.3 All anchor and sinker surfaces must be smooth and free from defects or protrusions that might adversely affect the serviceability and handling of the anchor or sinker.

10.2.4 Anchor and sinker surfaces must not be repaired by plugging or welding.

10.2.5 After casting, all surface slag and projecting edges must be removed.

10.2.6 All sharp edges must be ground, and the casting must be left clean.

10.2.7 Anchors and sinkers must not be painted or coated.

3.3 Weight Test

The Contractor must weigh each anchor and ensure that each anchor conforms to the tolerances listed on the Drawings (Appendix A and B).

3.4 Batch Testing

10.4.1 The Contractor must perform a drop test and a hammer blow test (per Appendix C).

10.4.2 For batch sizes than or equal to 5 anchors/sinkers, a minimum of 1 anchor/sink must be tested.

10.4.3 For batch sizes greater than 5 anchors/sinkers, 20% of the batch size must be tested (rounding up to the next whole number integer).

3.5 Traceability

10.5.1 The Contractor must maintain the traceability of steel throughout the manufacturing, testing, and inspection process for all anchors and sinkers.

10.5.2 Each component must be traceable through the batch number to the heat of steel from which it was made.

3.6 Certification

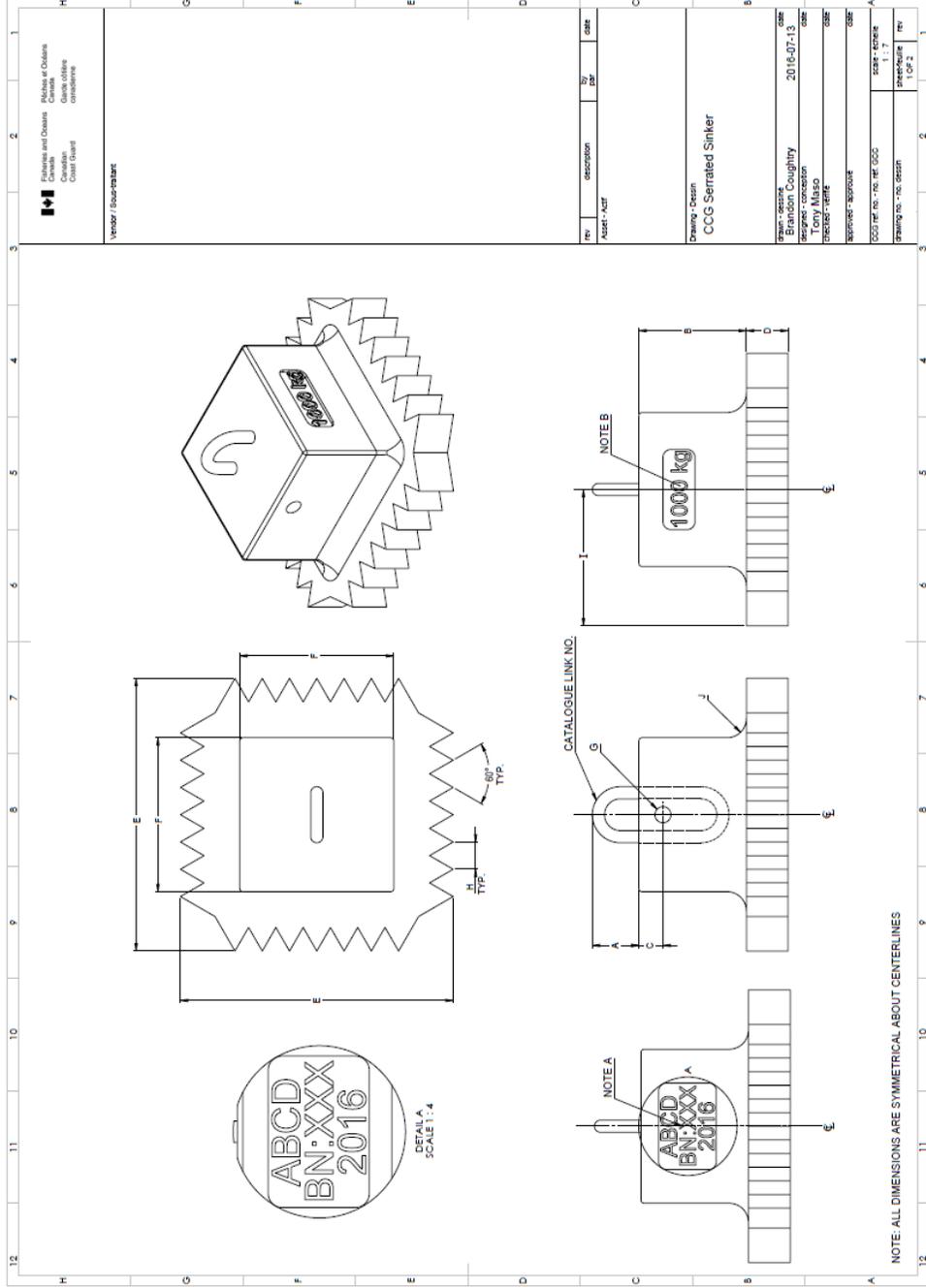
10.6.1 In accordance with the LR Rules Part 2, the Contractor must provide Canada with a certificate issued by Lloyds Register that confirms all anchors and sinkers conform to this specification and referenced standards.

10.6.2 One certificate must be issued for no more than 25 anchors and sinkers of the same size, type, and material prior to delivery, an Inspector must visually inspect each anchor and sinker. Any anchor or sinker found not to comply with this specification may be subject to rejection.

10.6.3 The certificate must also include the following information for all anchors and sinkers:

- 1) Contractor's name;
- 2) Date of issuance;
- 3) Description and dimensions;
- 4) Details of heat treatment;
- 5) Details of each weight test, per Section 3.3;
- 6) Details of each batch test, per Section 3.4;
- 7) Material certificate for grey cast iron used to manufacture the **anchors and sinkers**, which includes:
 - a. Batch number; and
 - b. Mechanical test results (i.e., yield stress, tensile strength, elongation, and Charpy V-notch impact tests).
- 8) Mill certificate for steel used to manufacture the **lifting link**, which includes:
 - a. Heat number;
 - b. Mechanical test results (i.e., yield stress, tensile strength, elongation, and Charpy V-notch impact tests);
 - c. Grade of steel; and
 - d. Chemical composition.

Appendix A CAST IRON SERRATED SINKERS



Appendix A: Cast Iron Serrated Sinkers

Catalogue Number	Mass (kg)	Link Catalogue	A	B	C	D	E	F	G	H	I	J
703-0060	60	105-14	53	150		50	300	180	20	35	150	20
703-0100	100			160		57	400	220		40	200	
703-0200	200	105-26	87	195	45	75	500	280	30	50	250	30
703-0400	400			250		90	650	350		65	325	
703-0600	600			285		100	750	400		75	375	
703-0800	800	105-38	126	310	75	116	800	445	50	80	400	60
703-1000	1000			335		130	850	480		85	425	
703-1500	1500			380		140	1000	500		100	500	
703-2000	2000			425		155	1100	600		110	550	
703-3000	3000	105-60	160	490	120	175	1250	690	80	125	625	90
703-3500	3500			505		195	1300	730		130	650	
703-4000	4000			540		200	1350	760		135	675	

NOTES

A: Manufacturer ID (ABCD), Batch Number BN(XXXX), Year Date (e.g. 2016) in raised 25 mm Arial Font lettering

B: Mass of Sinker (kg) in raised 50mm Arial Font lettering

All dimensions are in millimeters unless stated otherwise

TOLERANCES

Weight: +5.0%, -0%



Fisheries and Oceans
Canada
Pêches et Océans
Canada

Vendor/ Sous-traitant

2018-07-13

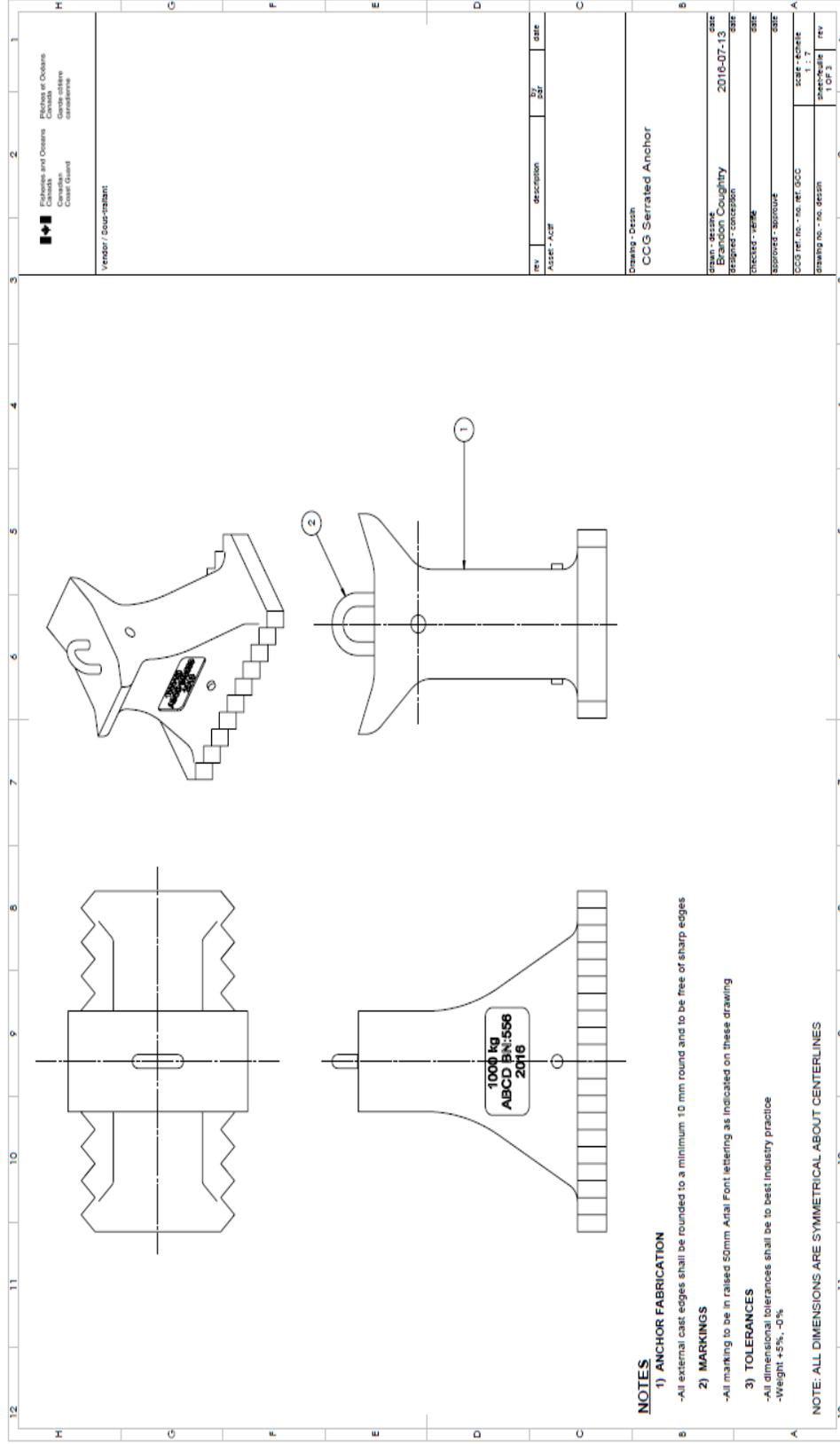
rev	description	rev	date
Asset - Act			

Drawing - Description
CCG Serrated Sinker

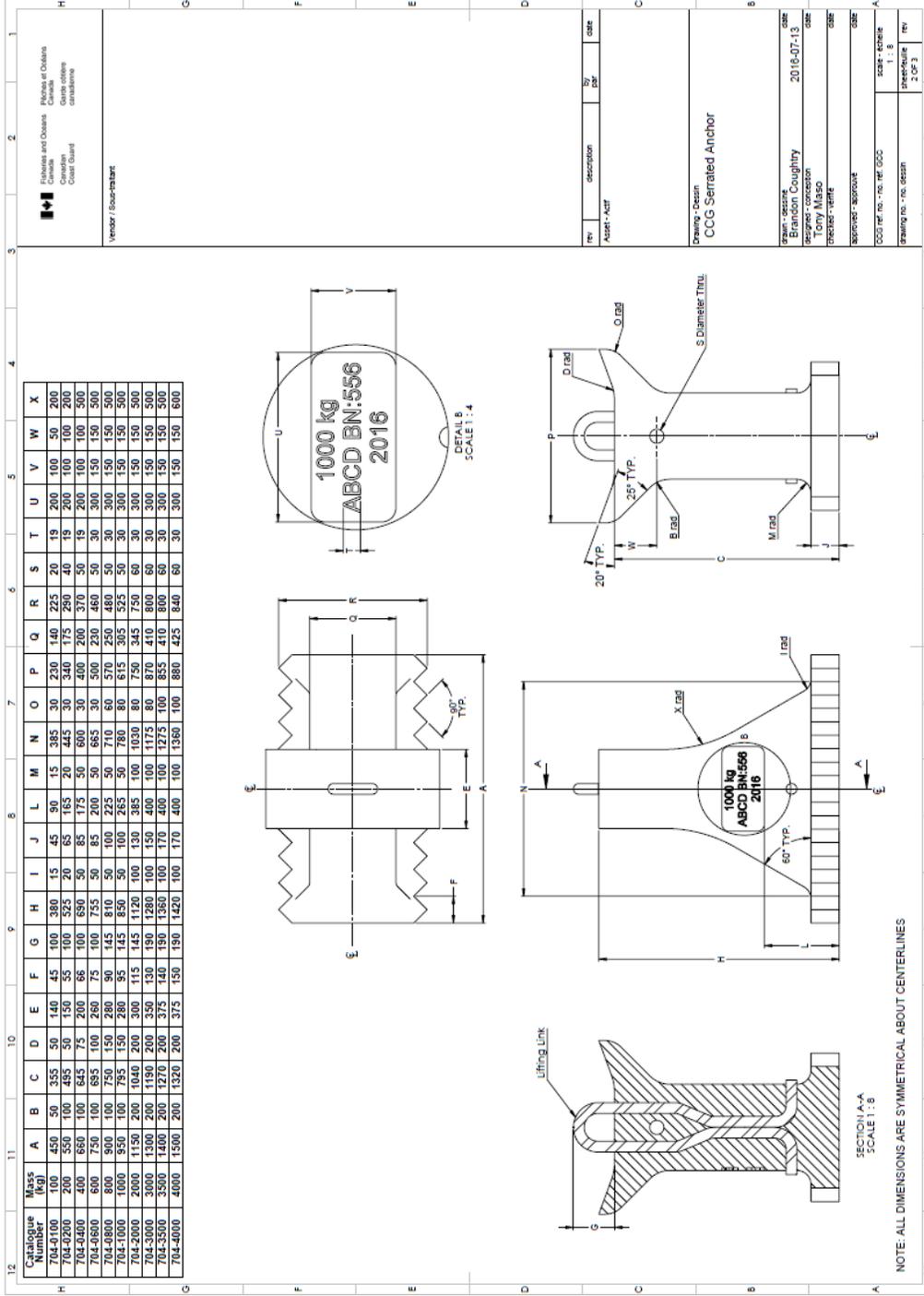
sheet number	date
2018-07-13	
checked by	date
Tony Maso	
approved by	date

Scale: ASBANK
1 : 5
drawing no. - no. dessin
2 OF 2

Appendix B CAST IRON SERRATED ANCHORS



Appendix B: Cast Iron Serrated Anchors



Appendix C TEST PROCEDURE

The following tests must be performed per each batch.

C.1 FREE FALL IMPACT TEST

C.1.1 Step 1: Pre-test Visual Inspection

The anchors and sinkers bodies must be visually inspected to see if there are any existing cracks prior to test. Any cracks must be noted.

C.1.2 Step 2: Free Fall Drop Test

Anchors and sinkers must be dropped from a height of 2 meters onto a hard surface. Two meters is measured from the underside of the anchor or sinker to the top of the hard surface**.

C.1.3 Step 3: Post-test Visual Inspection

The anchors and sinkers bodies must be visually inspected to determine if the drop test resulted in any new cracks on the bodies. In the event that a piece of anchor and sinker body has broken off, it must be re-weighed.

C.1.4 Step 4: Pass or Fail Criteria

If the reweighed anchor or sinker still meets its nominal weight, it must be deemed a PASS. If the reweighed anchor or sinker falls below its nominal weight, it must be deemed a FAIL and rejected.

*** The hard surface will consist of a minimum 20 mm thick steel plate over concrete or asphalt.*

C.2 HAMMER BLOW TEST

C.2.1 Step 1: Pre-test Visual Inspection

Anchors and sinkers must be visually inspected in the area where the lifting link emerges out of the cast body.

The two areas to be inspected must consist of a 360 degree circumferential check of the lifting link where it emerges out of the cast body.

Any significant rust or dirt must be cleaned prior to inspection.

C.2.2 Step 2: Hammer Blow Test #1

Using a 10 lb (4 kg) sledge, each link must receive a sideways blow with the sledge hammer, delivered perpendicular to the apex of the arc (see Figure C-1).

C.2.3 Step 3: Post-test Visual Inspection

The lifting link of the anchors and sinkers must be examined per C.2.1. The lifting link may bend slightly but must not break nor exhibit cracks after the test.

C.2.4 Step 4: Pass / Fail Criteria

If the lifting eye exhibits any fracturing, cracks, flaws, or deformation during this test, it will be rejected. Although bending of the lifting link is permissible, no cracks will be allowed.

C.2.5 Step 5: Hammer Blow Test #2

From the opposite side of the lifting link, deliver a hammer blow to the apex of the arc.

C.2.6 Step 6: Post-test Visual Inspection

The lifting link must be examined per C.2.1. The lifting link may bend slightly but must not break nor exhibit cracks after the test.

C.2.7 Step 7: Pass or Fail Criteria

If the lifting eye exhibits any fracturing, cracks, flaws, or deformation during this test, it will be rejected. Although bending of the lifting link is permissible, no cracks will be allowed.

Note: If at the end of the testing, the above deleterious conditions are not found, then the anchor or sinker will be deemed suitable for use and a certificate of compliancy can be issued.

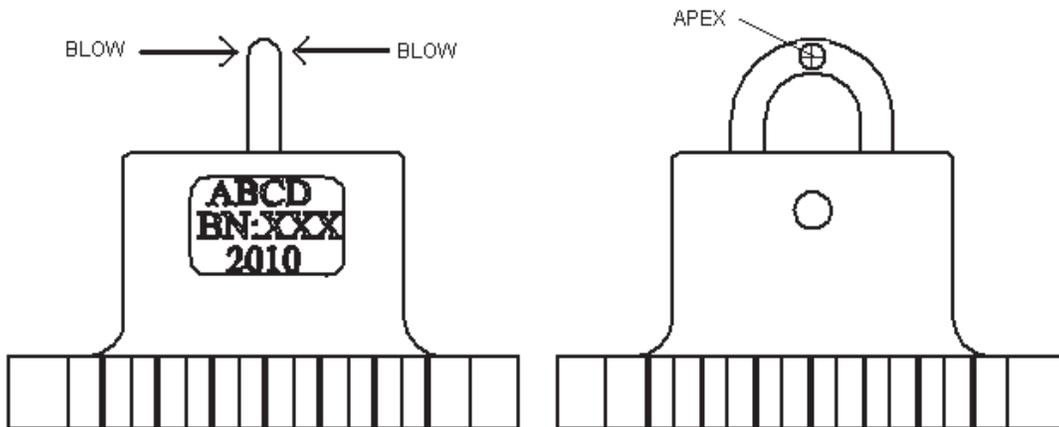


Figure C-1 Sideways blow to apex of lifting link

ANNEX "D"

BASIS OF PAYMENT

The Contractor will be paid in Canadian dollars, customs duties included and applicable taxes extra. Delivery is Delivered Duty Paid (DDP), Incoterms 2010. The Contractor is responsible for all delivery charges, administration, cost and risks of transport and customs clearance, including payment of customs duties and taxes to the destination.

The Contractor must provide for each part, prior to delivery, by electronic means, and with the delivery, a hardcopy, of either:

1. Lloyd's Certificate 1:

- A Lloyd's Register certificate for Grade U2 chain cable and fittings; which must include, but is not limited to, the information in Annex "B" Mooring Hardware for Aids to Navigation – Technical Specification, Section 3 – Quality Assurance, Inspection and Testing.

or

2. Lloyd's Certificate 2:

- A Lloyd's Register certificate for anchors and sinkers; which must include, but is not limited to, the information in Annex "C" Serrated Cast Iron Anchors & Sinkers – Technical Specification, Section 3 – Quality Assurance, Inspection and Testing.

1 Delivery Location:

CCG St. John's Base
 280 Southside Road
 St. John's, Newfoundland
 A1E 0A3

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
1	301-18	Buoy bridle shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
2	301-24	Buoy bridle shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
3	301-38	Buoy bridle shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
4	301-CK1	Buoy bridle shackle, COTTER KEY ONLY, CK1 Lloyd's Certificate 1		200	
5	301-CK2	Buoy bridle shackle, COTTER KEY ONLY, CK2 Lloyd's Certificate 1		200	
6	301-CK3	Buoy bridle shackle, COTTER KEY ONLY, CK3 Lloyd's Certificate 1		200	
7	302-18	Bow key shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		200	
8	302-24	Bow key shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		200	
9	302-32	Bow key shackle assembly, 32 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
10	401-28	Clinch shackle assembly, 28 mm bar size – c/w shackle and pin Lloyd's Certificate 1		200	
11	401-36	Clinch shackle assembly, 36 mm bar size – c/w shackle and pin Lloyd's Certificate 1		200	
12	401-45	Clinch shackle assembly, 45 mm bar size – c/w shackle and pin Lloyd's Certificate 1		100	
13	501-24	Swivel assembly, 24 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		100	

Solicitation No. - N° de l'invitation
 F7047-180145/A
 Client Ref. No. - N° de réf. du client
 F7047-180145

Amd. No. - N° de la modif.
 File No. - N° du dossier
 062ml.F7047-180145

Buyer ID - Id de l'acheteur
 062ml
 CCC No./N° CCC - FMS No./N° VME

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
14	501-32	Swivel assembly, 32 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		50	
15	501-38	Swivel assembly, 38 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		50	
16	701-0025	Counterweight, 25 kg Lloyd's Certificate 2		25	
17	701-0075	Counterweight, 75 kg Lloyd's Certificate 2		20	
18	701-0200	Counterweight, 200 kg Lloyd's Certificate 2		20	
19	703-0100	Serrated sinker, 100 kg Lloyd's Certificate 2		25	
20	703-0800	Serrated sinker, 800 kg Lloyd's Certificate 2		8	
21	703-2000	Serrated sinker, 2000 kg Lloyd's Certificate 2		8	
22	703-3000	Serrated sinker, 3000 kg Lloyd's Certificate 2		6	
23	703-4000	Serrated sinker, 4000 kg Lloyd's Certificate 2		6	
24	901-2	Y-bridle assembly – 32 mm standard chain, 4.5 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		15	
25	901-3	Y-bridle assembly – 38 mm standard chain, 3.0 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		15	

Solicitation No. - N° de l'invitation
 F7047-180145/A
 Client Ref. No. - N° de réf. du client
 F7047-180145

Amd. No. - N° de la modif.
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 062ml.F7047-180145

Buyer ID - Id de l'acheteur
 062ml
 CCC No./N° CCC - FMS No./N° VME

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
26	Assy 101-20	20 mm standard buoy chain assembly – 1 shot of 101-20 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		150	
27	Assy 101-26	26 mm standard buoy chain assembly – 1 shot of 101-26 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		75	
28	Assy 101-32	32 mm standard buoy chain assembly – 1 shot of 101-32 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		75	
Sub-total					
Taxes (15%)					
Total (Location 1)					

2 Delivery Location:

CCG Dartmouth Base
 102 Magnificent Avenue
 Dartmouth, Nova Scotia
 B2W 1O5

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
29	301-38	Buoy bridle shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
30	302-26	Bow key shackle assembly, 26 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		500	

Solicitation No. - N° de l'invitation
 F7047-180145/A
 Client Ref. No. - N° de réf. du client
 F7047-180145

Amd. No. - N° de la modif.
 File No. - N° du dossier
 062ml.F7047-180145

Buyer ID - Id de l'acheteur
 062ml
 CCC No./N° CCC - FMS No./N° VME

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
31	302-38	Bow key shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		200	
32	401-20	Clinch shackle assembly, 20 mm bar size – c/w shackle and pin Lloyd's Certificate 1		450	
33	401-45	Clinch shackle assembly, 45 mm bar size – c/w shackle and pin Lloyd's Certificate 1		200	
34	501-46	Swivel assembly, 46 mm bar size – c/w two installed end links per TDS 501 Lloyd's Certificate 1		100	
35	701-0025	Counterweight, 25 kg Lloyd's Certificate 2		25	
36	701-0100	Counterweight, 100 kg Lloyd's Certificate 2		50	
37	703-0100	Serrated sinker, 100 kg Lloyd's Certificate 2		25	
38	703-0200	Serrated sinker, 200 kg Lloyd's Certificate 2		25	
39	703-0800	Serrated sinker, 800 kg Lloyd's Certificate 2		10	
40	703-1000	Serrated sinker, 1000 kg Lloyd's Certificate 2		20	
41	704-2000	Serrated anchor, 2000 kg Lloyd's Certificate 2		10	
42	704-4000	Serrated anchor, 4000 kg Lloyd's Certificate 2		12	

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
43	801-1	V-bridle assembly – 38 mm standard chain, 4.0 m leg length, c/w bridle ring and end links installed per TDS 801 Lloyd's Certificate 1		50	
44	901-2	Y-bridle assembly – 32 mm standard chain, 4.5 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		50	
45	Assy 101-16	16 mm standard buoy chain assembly – 1 shot of 101-16 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		100	
46	Assy 101-20	20 mm standard buoy chain assembly – 1 shot of 101-20 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		60	
47	Assy 101-38	38 mm standard buoy chain assembly – 1 shot of 101-38 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		100	
48	Assy 101-38, 55	38 mm standard buoy chain assembly, 2 shots, 2 swivels <ul style="list-style-type: none"> • 1x102-46 end link, installed; • 0.5 shot of 101-38 standard chain; • 1x501-46 swivel with end links, installed; • 1 shot of 101-38 standard chain; • 1x501-46 swivel with end links, installed; • 0.5 shot of 101-38 standard chain; and • 1x102-46 end link, installed. Lloyd's Certificate 1		50	
Sub-total					
Taxes (15%)					
Total (Location 2)					

3 Delivery Location:

CCG Charlottetown Base
 185 John Yeo Drive, Unit 2
 Charlottetown, Prince Edward Island
 C1A 7M8

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
49	301-18	Buoy bridle shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		125	
50	301-24	Buoy bridle shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		125	
51	301-32	Buoy bridle shackle assembly, 32 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		50	
52	301-38	Buoy bridle shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		25	
53	302-18	Bow key shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		1000	
54	302-24	Bow key shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		500	
55	302-26	Bow key shackle assembly, 26 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		1000	

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
56	302-32	Bow key shackle assembly, 32 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		50	
57	302-38	Bow key shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		25	
58	401-20	Clinch shackle assembly, 20 mm bar size – c/w shackle and pin Lloyd's Certificate 1		150	
59	401-28	Clinch shackle assembly, 28 mm bar size – c/w shackle and pin Lloyd's Certificate 1		100	
60	401-36	Clinch shackle assembly, 36 mm bar size – c/w shackle and pin Lloyd's Certificate 1		25	
61	501-18	Swivel assembly, 18 mm bar size – c/w two installed end links per TDS 501 Lloyd's Certificate 1		225	
62	501-24	Swivel assembly, 24 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		125	
63	501-38	Swivel assembly, 38 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		25	
64	701-0025	Counterweight, 25 kg Lloyd's Certificate 2		10	
65	701-0050	Counterweight, 50 kg Lloyd's Certificate 2		10	
66	701-0100	Counterweight, 100 kg Lloyd's Certificate 2		10	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
67	703-0060	Serrated sinker , 60 kg Lloyd's Certificate 2		5	
68	703-0200	Serrated sinker , 200 kg Lloyd's Certificate 2		5	
69	703-0400	Serrated sinker , 400 kg Lloyd's Certificate 2		8	
70	703-0600	Serrated sinker , 600 kg Lloyd's Certificate 2		8	
71	703-0800	Serrated sinker , 800 kg Lloyd's Certificate 2		10	
72	703-1000	Serrated sinker , 1000 kg Lloyd's Certificate 2		10	
73	901-1	Y-bridle assembly – 26 mm standard chain, 3.0 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		8	
74	901-4	Y-bridle assembly – 38 mm standard chain, 4.0 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		8	
75	Assy 101-20	20 mm standard buoy chain assembly – 1 shot of 101-20 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		100	
76	Assy 101-26	26 mm standard buoy chain assembly – 1 shot of 101-26 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		45	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
77	Assy 101-32	32 mm standard buoy chain assembly – 1 shot of 101-32 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		30	
78	Assy 101-32, 55, 2 SW	32 mm standard buoy chain assembly, 2 shots, 2 swivels <ul style="list-style-type: none"> • 1x102-38 end link, installed; • 0.5 shot of 101-32 standard chain; • 1x501-38 swivel with end links, installed; • 1 shot of 101-32 standard chain; • 1x501-38 swivel with end links, installed; • 0.5 shot of 101-32 standard chain; and • 1x102-38 end link, installed. Lloyd's Certificate 1		20	
79	Assy 103-14	14 mm long link chain assembly – 1 shot of 103-14 long link chain Lloyd's Certificate 1		150	
Sub-total					
Taxes (15%)					
Total (Location 3)					

Grand Total = Total (Location 1) + Total (Location 2) + Total (Location 3)

= \$ _____ + \$ _____ + \$ _____

= \$ _____ **(To be inserted upon Contract Award)**

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ANNEX "E"

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts 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)

ANNEX "F"

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)

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ANNEX "G"

INTEGRITY PROVISIONS – ASSOCIATED INFORMATION FORM

TO BE COMPLETED BY BIDDER:

Please provide list of names of the following entities, according to the ownership nature of the company

1. For a Corporation - each current member of the Bidder's Board of Directors:

(add lines as required)

2. For a Sole Proprietorship or an individual doing business under a firm name - the name of the sole proprietor or individual:

3. For a Joint Venture - the names of all current members of the Joint venture:

(add lines as required)

4. For an individual - the full name of the person:

ANNEX "H"

FINANCIAL EVALUATION

The Bidder must submit firm prices in Canadian dollars, customs duties included and applicable taxes extra. Delivery is Delivered Duty Paid (DDP), Incoterms 2010. The Contractor is responsible for all delivery charges, administration, cost and risks of transport and customs clearance, including payment of customs duties and taxes to the destination.

The Bidder will provide, prior to delivery, by electronic means, and with the delivery, a hardcopy, of either:

1. Lloyd's Certificate 1:
 - A Lloyd's Register certificate for Grade U2 chain cable and fittings; which must include, but is not limited to, the information in Annex "B" – Mooring Hardware for Aids to Navigation – Technical Specification, Section 3 – Quality Assurance, Inspection and Testing.

or

2. Lloyd's Certificate 2:
 - A Lloyd's Register certificate for anchors and sinkers; which must include, but is not limited to, the information in Annex "C" Serrated Cast Iron Anchors & Sinkers – Technical Specification, Section 3 – Quality Assurance, Inspection and Testing.

Bidder to complete:

While delivery is requested by June 28, 2019, the best delivery that could be offered is _____.

Bidder to complete pricing for ALL tables:

1 Delivery Location:

CCG St. John's Base
 280 Southside Road
 St. John's, Newfoundland
 A1E 0A3

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
1	301-18	Buoy bridle shackle assembly, 18 mm bar size –c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
2	301-24	Buoy bridle shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
3	301-38	Buoy bridle shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
4	301-CK1	Buoy bridle shackle, COTTER KEY ONLY, CK1 Lloyd's Certificate 1		200	
5	301-CK2	Buoy bridle shackle, COTTER KEY ONLY, CK2 Lloyd's Certificate 1		200	
6	301-CK3	Buoy bridle shackle, COTTER KEY ONLY, CK3 Lloyd's Certificate 1		200	
7	302-18	Bow key shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		200	
8	302-24	Bow key shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		200	
9	302-32	Bow key shackle assembly, 32 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
10	401-28	Clinch shackle assembly, 28 mm bar size – c/w shackle and pin Lloyd's Certificate 1		200	
11	401-36	Clinch shackle assembly, 36 mm bar size – c/w shackle and pin Lloyd's Certificate 1		200	
12	401-45	Clinch shackle assembly, 45 mm bar size – c/w shackle and pin Lloyd's Certificate 1		100	
13	501-24	Swivel assembly, 24 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		100	
14	501-32	Swivel assembly, 32 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		50	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
15	501-38	Swivel assembly, 38 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		50	
16	701-0025	Counterweight, 25 kg Lloyd's Certificate 2		25	
17	701-0075	Counterweight, 75 kg Lloyd's Certificate 2		20	
18	701-0200	Counterweight, 200 kg Lloyd's Certificate 2		20	
19	703-0100	Serrated sinker, 100 kg Lloyd's Certificate 2		25	
20	703-0800	Serrated sinker, 800 kg Lloyd's Certificate 2		8	
21	703-2000	Serrated sinker, 2000 kg Lloyd's Certificate 2		8	
22	703-3000	Serrated sinker, 3000 kg Lloyd's Certificate 2		6	
23	703-4000	Serrated sinker, 4000 kg Lloyd's Certificate 2		6	
24	901-2	Y-bridle assembly – 32 mm standard chain, 4.5 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		15	
25	901-3	Y-bridle assembly – 38 mm standard chain, 3.0 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		15	
26	Assy 101-20	20 mm standard buoy chain assembly – 1 shot of 101-20 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		150	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
27	Assy 101-26	26 mm standard buoy chain assembly – 1 shot of 101-26 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		75	
28	Assy 101-32	32 mm standard buoy chain assembly – 1 shot of 101-32 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		75	
Total (Location 1)					

2 Delivery Location:

CCG Dartmouth Base
 102 Magnificent Avenue
 Dartmouth, Nova Scotia
 B2W 1O5

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
29	301-38	Buoy bridle shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		100	
30	302-26	Bow key shackle assembly, 26 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		500	
31	302-38	Bow key shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		200	
32	401-20	Clinch shackle assembly, 20 mm bar size – c/w shackle and pin Lloyd's Certificate 1		450	
33	401-45	Clinch shackle assembly, 45 mm bar size – c/w shackle and pin Lloyd's Certificate 1		200	
34	501-46	Swivel assembly, 46 mm bar size – c/w two installed end links per TDS 501 Lloyd's Certificate 1		100	
35	701-0025	Counterweight, 25 kg Lloyd's Certificate 2		25	
36	701-0100	Counterweight, 100 kg Lloyd's Certificate 2		50	
37	703-0100	Serrated sinker, 100 kg Lloyd's Certificate 2		25	
38	703-0200	Serrated sinker, 200 kg Lloyd's Certificate 2		25	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
39	703-0800	Serrated sinker , 800 kg Lloyd's Certificate 2		10	
40	703-1000	Serrated sinker , 1000 kg Lloyd's Certificate 2		20	
41	704-2000	Serrated anchor , 2000 kg Lloyd's Certificate 2		10	
42	704-4000	Serrated anchor , 4000 kg Lloyd's Certificate 2		12	
43	801-1	V-bridle assembly – 38 mm standard chain, 4.0 m leg length, c/w bridle ring and end links installed per TDS 801 Lloyd's Certificate 1		50	
44	901-2	Y-bridle assembly – 32 mm standard chain, 4.5 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		50	
45	Assy 101-16	16 mm standard buoy chain assembly – 1 shot of 101-16 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		100	
46	Assy 101-20	20 mm standard buoy chain assembly – 1 shot of 101-20 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		60	
47	Assy 101-38	38 mm standard buoy chain assembly – 1 shot of 101-38 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		100	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
48	Assy 101-38, 55	<p>38 mm standard buoy chain assembly, 2 shots, 2 swivels</p> <ul style="list-style-type: none"> • 1x102-46 end link, installed; • 0.5 shot of 101-38 standard chain; • 1x501-46 swivel with end links, installed; • 1 shot of 101-38 standard chain; • 1x501-46 swivel with end links, installed; • 0.5 shot of 101-38 standard chain; and • 1x102-46 end link, installed. <p>Lloyd's Certificate 1</p>		50	
Total (Location 2)					

3 Delivery Location:

CCG Charlottetown Base
 185 John Yeo Drive, Unit 2
 Charlottetown, Prince Edward Island
 C1A 7M8

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
49	301-18	Buoy bridle shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		125	
50	301-24	Buoy bridle shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		125	
51	301-32	Buoy bridle shackle assembly, 32 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		50	
52	301-38	Buoy bridle shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		25	
53	302-18	Bow key shackle assembly, 18 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		1000	
54	302-24	Bow key shackle assembly, 24 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		500	
55	302-26	Bow key shackle assembly, 26 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		1000	
56	302-32	Bow key shackle assembly, 32 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		50	
57	302-38	Bow key shackle assembly, 38 mm bar size – c/w shackle, pin, and cotter key Lloyd's Certificate 1		25	

Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
58	401-20	Clinch shackle assembly, 20 mm bar size – c/w shackle and pin Lloyd's Certificate 1		150	
59	401-28	Clinch shackle assembly, 28 mm bar size – c/w shackle and pin Lloyd's Certificate 1		100	
60	401-36	Clinch shackle assembly, 36 mm bar size – c/w shackle and pin Lloyd's Certificate 1		25	
61	501-18	Swivel assembly, 18 mm bar size – c/w two installed end links per TDS 501 Lloyd's Certificate 1		225	
62	501-24	Swivel assembly, 24 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		125	
63	501-38	Swivel assembly, 38 mm bar size – c/w two installed end links per TDS 105 Lloyd's Certificate 1		25	
64	701-0025	Counterweight, 25 kg Lloyd's Certificate 2		10	
65	701-0050	Counterweight, 50 kg Lloyd's Certificate 2		10	
66	701-0100	Counterweight, 100 kg Lloyd's Certificate 2		10	
67	703-0060	Serrated sinker, 60 kg Lloyd's Certificate 2		5	
68	703-0200	Serrated sinker, 200 kg Lloyd's Certificate 2		5	
69	703-0400	Serrated sinker, 400 kg Lloyd's Certificate 2		8	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
70	703-0600	Serrated sinker, 600 kg Lloyd's Certificate 2		8	
71	703-0800	Serrated sinker, 800 kg Lloyd's Certificate 2		10	
72	703-1000	Serrated sinker, 1000 kg Lloyd's Certificate 2		10	
73	901-1	Y-bridle assembly – 26 mm standard chain, 3.0 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		8	
74	901-4	Y-bridle assembly – 38 mm standard chain, 4.0 m leg length, c/w bridle ring, end links, and swivel installed per TDS 901 Lloyd's Certificate 1		8	
75	Assy 101-20	20 mm standard buoy chain assembly – 1 shot of 101-20 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		100	
76	Assy 101-26	26 mm standard buoy chain assembly – 1 shot of 101-26 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		45	
77	Assy 101-32	32 mm standard buoy chain assembly – 1 shot of 101-32 standard chain, c/w two end links installed per TDS 102 Lloyd's Certificate 1		30	

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Item No.	CCG Catalog No.	Item Description	Unit Price (\$ / each)	Quantity	Extended Price (\$)
78	Assy 101-32, 55, 2 SW	32 mm standard buoy chain assembly, 2 shots, 2 swivels <ul style="list-style-type: none"> • 1x102-38 end link, installed; • 0.5 shot of 101-32 standard chain; • 1x501-38 swivel with end links, installed; • 1 shot of 101-32 standard chain; • 1x501-38 swivel with end links, installed; • 0.5 shot of 101-32 standard chain; and • 1x102-38 end link, installed. Lloyd's Certificate 1		20	
79	Assy 103-14	14 mm long link chain assembly – 1 shot of 103-14 long link chain Lloyd's Certificate 1		150	
Total (Location 3)					

Financial Evaluation will be based on the total of all three locations.

Bidder to complete

Grand Total = Total (Location 1) + Total (Location 2) + Total (Location 3)

= \$ _____ + \$ _____ + \$ _____

Price of the bid = \$ _____