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SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Title - Sujet Recommissioning DP4 - Amundsen	
Solicitation No. - N° de l'invitation F3756-18N044/A	**Amendment No. - N° modif.** 006
Client Reference No. - N° de référence du client F3756-18N044	**Date** 2018-07-26
GETS Reference No. - N° de référence de SEAG PW-$QCL-036-17397	
File No. - N° de dossier QCL-8-41014 (036)	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-08-09	**Time Zone** **Fuseau horaire** Heure Avancée de l'Est HAE
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes **Plant-Usine:** ☐ **Destination:** ☐ **Other-Autre:** ☑	
Address Enquiries to: - Adresser toutes questions à: Gagnon, Mathieu	**Buyer Id - Id de l'acheteur** qcl036
Telephone No. - N° de téléphone (418) 649-2883 ( )	**FAX No. - N° de FAX** (418) 648-2209
Destination - of Goods, Services, and Construction: **Destination - des biens, services et construction:**	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	**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**	

Canada

Please amend the above mentioned bidding solicitation with the changes here below in relation to the Solicitation closing date and the Vessel viewing.

Item 1 – Section 4 – Electrical wiring penetration checks, of the Statement of Work, of the Invitation to Tender

Insert section 4 – Electrical wiring penetration checks, to the Statement of Requirement, of the Invitation to Tender as follow:

4 ELECTRICAL WIRING PENETRATION CHECKS

4.1 Scope of work

During a recent flooding incident on a CCG vessel, the spaces adjacent to the affected compartment began to take water. It was determined that one of the sources of the water ingress was a poorly maintained cable transit.

Grommet systems are used to pass through bulkheads or decks in a way that preserves the fire-resistance rating and water tightness of the bulkheads or decks. These transit systems are generally installed and inspected during a vessel's construction and are no longer inspected throughout the vessel's life cycle, except when a run needs to be added or removed.

4.2 Reference

4.2.1 Reference material

- Dénombrement_des_transit_Amundsen_2017-12-14-FG

4.3 Technical description

4.3.1.1 The transit systems must be checked using ultrasound to ensure that they are installed correctly. All transits identified in the "Dénombrement_Des_Transit_Amundsen_2017-12-14-FG" report must be addressed.

4.3.1.2 Allow 120 hours for the inspection.

4.3.1.3 The unit used to check the installations must be a CTRL UL101 ultrasound leak inspection system or equivalent. The probe shall operate under a frequency bandwidth of 1.8 to 2.2 kHz.

4.4 Proof of performance

4.4.1 Deliverable documents:

4.4.1.1 The Contractor will produce a bilingual report detailing the anomalies found and the necessary steps to correct each non-conformity.

Item 2 – Section 5 – Repair of a bulkhead penetration, of the Statement of Work, of the Invitation to Tender

Insert section 5 – Repair of a bulkhead penetration, to the Statement of Requirement, of the Invitation to Tender as follow:

5 REPAIR OF A BULKHEAD PENETRATION

5.1 Scope of work

The work consists of replacing the exterior penetration of the officers' deck for the fire line's F.S. No. 2 port hydrant.

5.2 Reference

5.2.1 Reference material

- IMG1131
- IMG1132
- IMG1136
- 221-660-1

5.3 Technical description

5.3.1.1 The material shall comply with the requirements stipulated in drawing 221-660-1.

5.3.1.2 The diameter of the pipe to be replaced is 2½ inches. The length of the pipe to be replaced is 4 inches, including a T-connector.

Item 3 – Section 6 – Miranda Davit 5-year inspection, of the Statement of Work, of the Invitation to Tender

Insert section 6 – Miranda Davit 5-year inspection, to the Statement of Requirement, of the Invitation to Tender as follow:

6 MIRANDA DAVIT 5-YEAR INSPECTION

6.1 Scope of work

6.1.1.1 The objective of the work is to do the 5 year maintenance and inspection of the Miranda davit by the Harding Watercraft Canada Company, Davit type MRT 3900, and winch type BHY 5300.

6.2 Reference

6.2.1 Reference material

- Miranda Davit manual
- Miranda DWG
- BHY 5300

6.3 Technical description

6.3.1.1 Provide the service of a FSR from the Manufacturer for the davit inspection work. The FSR shall comply with the requirements of MSC.1/Circ.1277.

6.3.1.2 The cables must be removed and installed by the contrator.

6.3.1.3 Proceed with identification and disassembly of all pulleys, sheaves, and pins, then clean each part for inspection. All lubrication paths must be cleaned. Each removed item must be sandblasted to allow for visual inspection.

6.3.1.4 Each pin, pivot, and bearing must be measured and then recorded in a log supplied by the contractor.

6.3.1.5 Each pin and pivot must undergo a liquid penetrant test to detect cracks.

6.3.1.6 After sandblasting and inspection, paint the pulleys and sheaves according to the following paint system:

- First coat: Interzinc 52 or equivalent, 3 mils DFT
- Second coat: Intergard 264 or equivalent, 7 mils DFT
- Third coat: Interthane 990 or equivalent bluish, PHB000/PHA046; 3 mils DFT

6.3.1.7 Clean the hydraulic reservoir and gear box. Replace the oils with oils supplied by de CCG. The oils are supplied by CCG.

6.3.1.8 Visually inspect the gear box.

6.3.1.9 The hydraulic system filter must be replaced and must be supplied by the Contractor. The filter will be supplied by CCG.

6.3.1.10 Disassemble and clean the electric motors of the hydraulic pumps. Replace the electric motor bearings and the oil seals. Non-identified parts that need to be replaced will be a extra work (1379).

6.3.1.11 The rollers must be disassembled and carefully inspected.

6.3.1.12 Provide a preliminary report of the dimension measurements and recommendations for corrective measures. Replacement of damaged parts will be negotiated using Form TPSGC 1379.

6.3.1.13 Replace all grease nipples with 316 high-pressure stainless steel nipples.

6.3.1.14 Once the paint has dried and is to the satisfaction of the Chief Engineer, all components must be lubricated with grease supplied by the ship and the components must then be put back in place.

6.3.1.15 A second lubrication is to be done, taking care to move the components during the lubrication process.

6.3.1.16 Replace the centrifugal break assembly including the shaft and the housing.

6.3.1.17 Check the manual counterweight brake. All parts found to be defective or too worn out must be replaced with equivalent parts supplied by the Contractor. The costs will be extra work from the contract.

6.3.1.18 Prepare and conduct a magnetic particle inspection of the davit base. An inspection report must be provided.

6.4 Proof of performance:

6.4.1 Inspection

6.4.1.1 All repairs and inspections shall be approved by the FSR.

6.4.2 Trials

6.4.2.1 After all davit parts have been reinstalled, the Contractor must carry out a 110% load test representing the weight of the vessel plus (+) the distributed weight equal to the number of people that the vessel is capable of accommodating, including pulleys and falls. (The required weight of 3045 kg for the tests must be supplied by the Contractor.)

6.4.3 Deliverable documents:

6.4.3.1 Measurement and test report for all dismantled components;

6.4.3.2 Report on all inspections performed on each piece of equipment;

6.4.3.3 T8 Certificate as Transport Canada's requirement.

Item 4 – Section 7 – Accommodation Ladders' 5-year inspection, of the Statement of Work, of the Invitation to Tender

Insert section 7 – Accommodation Ladders' 5-year inspection, to the Statement of Requirement, of the Invitation to Tender as follow:

7 ACCOMMODATION LADDERS' 5-YEAR INSPECTION

7.1 Scope of work

The objective of the work is to perform the 5-year inspection of both accommodation ladder systems (STBD and PORT)

7.2 Reference

7.2.1 Reference material

- 221-H-72
- F3-3169

7.3 Technical description

7.3.1.1 Operate each accommodation ladder prior to disassembly in the presence of a GCC technical representative for initial evaluation.

7.3.1.2 Proceed with the removal and installation of the cables.

7.3.1.3 Supply two new cables for each accommodation ladder. The required cable type is:

- Diameter: 3/8"
- Length: 120'
- Type: 7x19 galvanized
- One end free, the other end equipped with a lug (G-411) with a mechanical splice and a Flemish roller.

7.3.1.4 Proceed with the identification and disassembly of all pulleys, sheaves, and pins, then clean each part for inspection. All grease ways must be cleaned and new stainless-steel grease nipples must be installed.

7.3.1.5 Each removed item must be sandblasted to allow for visual inspection. Each pin and pivot must undergo a liquid penetrant test to detect cracks. Each pin, pivot, and bearing must be measured and then recorded in a log supplied by the Contractor.

7.3.1.6 All parts found to be defective or too worn must be replaced with equivalent parts supplied by the Contractor. The costs will be negotiated separately using form 1379 with an appropriate description.

7.3.1.7 After disassembly, all parts must be inspected by a Transports Canada representative.

7.3.1.8 After sandblasting and inspection, paint the pulleys and sheaves according to the following paint system:

- First coat: Interzinc 52 or equivalent, 3 mils DFT
- Second coat: Intergard 264 or equivalent, 7 mils DFT
- Third coat: Interthane 990 red or equivalent, 3 mils DFT

7.3.1.9 For each ladder, the winch and electric motor must be inspected.

7.3.1.10 Replace the gear box oil with oil supplied by the ship.

7.3.1.11 Provide a preliminary report of the dimension measurements and recommendations for corrective measures. Parts to be replaced and repaired must be handled separately via a form (1379).

7.3.1.12 The ladders must reinstalled and the greased with grease supplied by CCG.

7.4 Proof of performance:

7.4.1 Trials

7.4.1.1 The Contractor must demonstrate proper operation of the two ladders by conducting a maximum operational load test, i.e. 6 persons, 75 kg each (450 kg) according to the Transports Canada inspector's requests. The weights are to be supplied by the contractor.

7.4.1.2 All trials must be performed in the presence of Transport Canada Marine Safety inspector as well the CCG representative.

7.4.2 Deliverables:

7.4.2.1 Measurement and test report for all dismantled components;

7.4.2.2 Report on all inspections performed on each accommodation ladder;

7.4.2.3 Inspection certificates (T5);

7.4.2.4 Cable certificate.

Item 5 – Section 8 – Barge Davit's 5-year inspection, of the Statement of Work, of the Invitation to Tender

Insert section 8 – Barge Davit's 5-year inspection, to the Statement of Requirement, of the Invitation to Tender as follow:

8 BARGE DAVIT'S 5-YEAR INSPECTION

8.1 Scope of work

8.1.1.1 The objective of the work is to perform the 5 year inspection of the Barge Davit system.

8.2 Reference documents

- Welin davit manual
- 17485-A_01
- Liste d'inspection

8.3 Technical description

8.3.1.1 The work must start as soon as the vessel has been unloaded and the fore and aft steel cables have been removed by the ship's crew. New cables will be supplied by CCG and installed by the contractor.

8.3.1.2 Removal from the davit of all the sheaves, hinge pins, shackles, hooks and other critical items is to be done taking care to implement measures so that they are reinstalled in their same respective locations once the work is completed. The parts must be stamped.

8.3.1.3 The Contractor must support the davit arms and safely secure them during the work.

8.3.1.4 The seating plate welds must undergo a magnetic particle test by a specialized company. The preparation for these tests must be included in the price. Provide a report on these tests.

8.3.1.5 The hooks must be removed, cleaned, and inspected using the same procedures as the pins. They are not to be tested, unless repairs are made. This work will be negotiated using form 1379, as applicable.

8.3.1.6 All disassembled components are to be cleaned and stripped down to the bare metal using a process that does not damage the metal, such as sandblasting.

8.3.1.7 An inspection using an accepted detection method must be done to detect any cracks or anomalies in the components.

8.3.1.8 Accurate measurements of all components must be taken and noted in a final report, which must describe all the work carried out. Three copies of this report must be provided to the Chief Engineer once the work is completed.

8.3.1.9 All brass rings and grease ways must be cleaned and, depending on the results of this inspection, any components found to be damaged must be replaced. This will be extra work.

8.3.1.10 Replace all grease nipples with 316 high-pressure stainless steel nipples.

8.3.1.11 The Contractor must also support the main boom so that the two shackles can be removed and inspected. The boom weighs approximately 2 tonnes.

8.3.1.12 Items sandblasted clean and affected by the work must be painted using the following painting system:

- First coat: Interzinc 52, 3 mils DFT
- Second coat: Intergard 264, 7 mils DFT
- Third coat: Interthane 990 bluish white, 3 mils DFT

8.3.1.13 Once the paint has dried and is to the satisfaction of the Chief Engineer, all components must be lubricated with grease supplied by the ship and the components must then be put back in place.

8.3.1.14 A second lubrication must be done, taking care to move the components during the lubrication process.

8.3.1.15 The 2 tension spring systems shall be inspected to demonstrate that they are in good condition.

8.3.1.16 The 5 gear boxes must be visually inspected. The new oil will be supplied by the CCG.

8.3.1.17 The 2 worm gear mechanisms must be inspected to demonstrate that they are in good condition.

8.3.1.18 The brake and ratchet mechanism must be inspected to demonstrate that they are in good condition.

8.4 Proof of performance

8.4.1 Trials

8.4.1.1 Upon completion of the work, static and dynamic tests must be conducted in the presence of the Contractor and GCC personnel. The weight for conducting the tests is 6050 kg, which must be provided by the Contractor.

8.4.1.2 All trials must be performed in the presence of Transport Canada Marine Safety inspector as well the CCG representative.

8.4.2 Deliverables:

8.4.2.1 Measurement and test report for all dismantled components;

8.4.2.2 Report on all inspections performed on each accommodation ladder;

8.4.2.3 Inspection certificates (T8);

Item 6 – Section 9 – Storage under the wheelhouse, of the Statement of Work, of the Invitation to Tender

Insert section 9 – Storage under the wheelhouse, to the Statement of Requirement, of the Invitation to Tender as follow:

9 STORAGE UNDER THE WHEELHOUSE

9.1 Scope of work

9.1.1.1 Replacing the storage compartment's existing wooden structure with a steel structure.

9.2 Reference

9.2.1 Reference documents:

- Photo of compartment
- Sketch of compartment
- 221-H-101-T

9.3 Technical description

9.3.1.1 The crew will dismantle the wooden structure and scrap it.

9.3.1.2 Install a structure made of 1/8-inch thick steel plate and 3/16-inch flat vertical stiffeners spaced every 16 inches. The surface to be covered measures 48 inches x 117 inches and 48 inches x 60 inches as well as the sides to close off the stairway that measure 46 inches x 48 inches. The steel has to be G40.21-44W grade. The steel has to be coated with weldable, zinc silicate-based primer. The steel shall be blasted at SA½ prior to the application of the weldable, zinc silicate-based primer.

9.3.1.3 The plates' welded joints have to be continuous so that the compartment will be watertight. Drainage holes must be made in the corners of the structure.

9.3.1.4 Install two steel access doors 57.5 inches x 40 inches like the existing doors, with a head flashing above the doors to deflect rain. Provide and install four loose-joint hinges and two sliding locks in 316 stainless steel.

9.3.1.5 Install a drain line of threaded galvanized steel that runs along the wall and crosses the bulkhead. Measurement: ½-inch diameter x 10 linear feet, with four threaded elbows. The line has to have one with a drainage slope.

9.3.1.6 Fabricate and weld 12 semi-circular attachment points with a ½-inch steel round bar with four inches between the welded legs; install on the new plate at locations specified by the Chief Officer.

Item 7 – Section 10 – Five-Year inspection of the main propulsion circuit breakers, of the Statement of Work, of the Invitation to Tender

Insert section 10 – Five-year inspection of the main propulsion circuit breakers, to the Statement of Requirement, of the Invitation to Tender as follow:

10 FIVE-YEAR INSPECTION OF THE MAIN PROPULSION CIRCUIT BREAKERS

10.1 Scope of work

10.1.1.1 The work consists of carrying out the complete verification, tests, certification, delivery and returning to service of six (6) main propulsion one pole DC breakers with a capacity of 6000 amperes on the CCGS Amundsen.

10.2 Reference

10.2.1 Reference documents:

- Siemens_Breaker_3WV1
- Siemens__Breaker_Document_3WV2304
- Parts_list

10.3 Technical description

10.3.1.1 The contractor is responsible for disconnecting and reconnecting the circuit breakers as well as the cost of transport (to/from) the ship to their facilities.

10.3.1.2 The contractor shall transport the six breakers from the set-up cubicle to the helicopter deck.

10.3.1.3 During transport, the (6) breakers will be moved using the ship's crane to the dock or directly onto the contractor's truck.

10.3.1.4 All six (6) Breakers will be removed from the ship simultaneously. To restore the propulsion capacity faster, when the two circuit breakers are ready, the contractor shall certify them and install them on board.

10.3.1.5 Each breaker shall be dismantled by the contractor to perform the complete inspection of all internal mechanisms, cleaning, lubrication, and the replacement of parts if necessary.

10.3.1.6 Verification, adjustment and cleaning of all auxiliary and main contacts shall be performed.

10.3.1.7 A resistive test of the main contact of each breaker shall be performed.

10.3.1.8 Lubrication of all grease points shall be performed.

10.3.1.9 Special attention shall be paid to the pressure of the breakers' closing springs.

10.3.1.10 Special attention shall be paid to the spring charging motor brushes. The commutator shall be very well cleaned, free of carbon traces.

10.3.1.11 All mechanical linkages shall meet the manufacturer's specifications.

10.3.1.12 The final report shall include insulation resistance readings.

10.3.1.13 All trip tests shall be performed using primary current injection and be witnessed by a Transport Canada (TC) inspector or the CCG inspection electricity authority under the accreditation of the TC inspector if the TC inspector is not available. These breakers are an instantaneous tripping device.

10.3.1.14 Isolation plates inside the arc chute shall be inspected and cleaned. In the event that they are too damaged, the plates may be replaced by a material with the same properties, characteristics and thickness.

10.4 Proof of performance

10.4.1 Tests and inspections

10.4.1.1 Tests (primary and secondary injection) and inspections shall be made according to TCSM requirement.

10.4.2 Deliverables:

10.4.2.1 The contractor shall produce a report containing the following information:

10.4.2.2 The date and time the complete inspection/rebuilding of the circuit breakers have been certified by TC;

10.4.2.3 The name of the person who did the certification;

10.4.2.4 The serial number or identification number of the circuit breaker;

10.4.2.5 The date and time of the start and end of work, as well as the number of hours for each work day;

10.4.2.6 A description of the work done and of anomalies detected;

10.4.2.7 A list of parts replaced;

10.4.2.8 Photos of the anomalies;

10.4.2.9 The original TCMS certificates.

Item 8 – Section 11 – Removal of insulation containing asbestos, of the Statement of Work, of the Invitation to Tender

Insert section 11 – Removal of insulation containing asbestos, to the Statement of Requirement, of the Invitation to Tender as follow:

11 REMOVAL OF INSULATION CONTAINING ASBESTOS

11.1 Scope of work

11.1.1.1 The work consists of replacing the insulation for the # 2-3-4 and 5 ventilation units' steam piping. The current insulation contains asbestos and should be replaced by insulation that does not contain asbestos or other materials that are hazardous to health.

11.2 Reference

11.2.1 Reference documents:

- 028200_02_Sac-à-gants_20180326
- 141-19427-25_Quantités MCA Devis_rev
- 141-19427-25_informations identification conduite MCA_20180327
- 141_19427_25_F1_F10_NDCC_Amundsen_wspq_180327
- HVAC pics

11.3 Technical description

11.3.1.1 The asbestos removal work is limited to removing the insulation for steam and condensate piping in HVAC #2-3-4-5 compartments. The method of disposing of insulation containing asbestos must comply with the requirement of the specification 028200_02_Sac-à-gants_20180326.

11.3.1.2 Insulation containing asbestos must be replaced by the manufacturer's Earthwool 1000-degree Pipe Insulation, or an equivalent. The insulation must be covered with fire-retardant cotton with white fire-retardant coating. The insulation must be selected for a fluid temperature of 201-250°F. The conductivity range of the insulation shall be of 0.27-0.30 BTU-in./ (hr.ft².°F).

11.3.1.3 The insulation shall be approved by Transport Canada or a classification society.

11.3.1.4 The new insulation must be installed by staff qualified for this type of work. The supervisor must have a minimum of 5 years' experience in laying thermal insulation and must have been responsible for 5 similar projects over the past 5 years.

11.3.1.5 Piping length in lineal feet and diameter for each HVAC unit:

- HVAC #2:
  - Steam: 9 lineal feet of piping, D: 1½ inches
  - Condensate: 20 lineal inches of piping, D: 1½ inches; 65 lineal inches of piping, D: 1/2 inch

- HVAC #3:

- Steam: 21 feet of piping, D: 1½ inches; 25 feet of piping, D: 2 inches
- Condensate: 20 lineal inches of piping, D:1½ inches; 65 inches of piping, D: ½ inch

- HVAC #4:
  - Steam: 8 lineal feet of piping, D:1¼ inches; 12 lineal feet of piping
  - Condensate: 12 lineal feet of piping, D: ½ inch
- HVAC #5:
  - Steam: 19 lineal feet of piping, D: 1½ inches

11.3.1.6 Condensate: 20 inches of piping, 1½ inches; 7.5 feet of piping, D: ½ inch

11.4 Proof of performance

11.4.1 Deliverables:

11.4.1.1 The Contractor shall provide insulation certificates demonstrating that it has been approved for marine applications.

Item 9 – Section 12 – Adding a line on the condensate return, of the Statement of Work, of the Invitation to Tender

Insert section 12 – Adding a line on the condensate return, to the Statement of Requirement, of the Invitation to Tender as follow:

12 ADDING OF A LINE ON THE CONDENSATE RETURN

12.1 Scope of work

The contractor shall add a line on the condensate return toward the hotwell to separate the returns.

12.2 Reference

12.2.1 Reference documents:

- Location of the new penetration on the hotwell
- Existing valve on the system
- Existing condensate line pictures
- 222-630-1
- 222-630-1_02

12.3 Technical description

12.3.1.1 The contractor shall give a price for the installation of 20 feet of condensate line on the vessel's steam system. The conduit's diameter is 1½ inches.

12.3.1.2 The line includes Butt weld-type joints. The contractor shall include 6 elbows and the replacement of a Tee joint by a union joint on the existing line.

12.3.1.3 The installation shall also include 6 bolted flandge ASA 150 Forged steel for on-site assembly.

12.3.1.4 The line also includes a sparger tube provided by the CCG and a support gusset inside the hotwell.

12.3.1.5 The pipe material must be according to the drawing requirement.

12.3.1.6 The hotwell is made of 316 stainless steel.

12.3.1.7 The welds must an air test in the shop prior their assembly.

12.3.1.8 The contractor shall also provide a 1½-inch globe valve. The valve must be made of bronze and have a bolted flange joint.

12.3.1.9 The new line must be covered with insulation. The insulation shall be of inorganic mineral glass wool Earthwool 1000° Pipe insualtion or equivalent. The insulation shall be covered by fire retardant with white fire retardant coating. The insulation must be selected for a fluid temperature of 201-250°F. The conductivity range of the insulation shall be of 0.27-0.30 BTU-in./ (hr.ft².°F).

12.3.1.10 The insulation shall be approved by Transport Canada or a classification society.

Item 10 – Section 13 – Replacement of 2 circuit breakers, of the Statement of Work, of the Invitation to Tender

Insert section 13 – Replacement of 2 circuit breakers, to the Statement of Requirement, of the Invitation to Tender as follow:

13 REPLACEMENT OF 2 CIRCUIT BREAKERS

13.1 Scope of work

13.1.1.1 The Contractor shall replace the MCC11 circuit breaker and the sprinkler pump circuit breaker.

13.2 Reference

13.2.1 Reference documents:

- #9 -Disjoncteurs – Breakers
- 222-900-1
- 222-900-8_15

13.3 Technical description

13.3.1.1 The work must be coordinated with the Chief Engineer or Electrical Officer because sections of the vessel will be without electricity while work is underway. This work may be carried out in the evening, after 6 p.m.

13.3.1.2 Both circuit breakers are located on the switchboard in the port-side control room:

- Circuit breaker #1 (MCC11) is located at the bottom of section 10, in non-essential distribution.
- Circuit breaker #2 (Sprinkler Pump Ess.) is located at the top of section 8, in essential distribution.

13.3.1.3 The Contractor shall provide 2 breakers for the replacement of the breaker in place of brand Eaton (Cutler-Hammer – Westinghouse) with the following options. The new breakers shall have the same capacities and functionalities as the one in place.

Circuit breaker #1 (MCC11)

- RIGHT MGTE
- 1 - LA3400PRF
- 1 - LA3350PT
- 3 - 400LAP10
- 1 - SHT120RA (2606D56G05)
- RIGHT MGTE
- 3 - TA400LA1
- (1X (4-250MCM) + 1X (3/0-600MCM))
- 1 - 50 DEG C CALIBRATION

Circuit breaker #2 (Sprinkler Pump Ess.)

- 1 - HMCP150U4S
- 1 - ELC3150R
- 3 - 3TA225FD
- 1 - (1 X 4-4/0AWG) (PACK OF 3)
- 1 - A1X1P1K
- NO 50 DEG C. CALIBRATION, BECAUSE NO HEATING ELEMENTS

13.3.1.4 Supply the material and labour to removal and installation the circuit breakers. The two actual breakers shall be replaced by the 2 new breakers supplied by the contractor.

13.4 Proof of performance

13.4.1 Trials

13.4.1.1 The contractor shall demonstrate the proper operation of the breaker by closing the breaker and put it in line on the system.

13.4.2 Deliverables:

13.4.2.1 The Contractor shall provide certificates for each circuit breaker.

Item 11 – Section 14 – Replacement of engine exhaust covers, of the Statement of Work, of the Invitation to Tender

Insert section 14 – Replacement of engine exhaust covers, to the Statement of Requirement, of the Invitation to Tender as follow:

14 REPLACEMENT OF ENGINE EXHAUST COVERS

14.1 Scope of work

14.1.1.1 The Contractor shall replace insulating covers on the exhaust pipes and manifold for Alco 251 engines. These covers must be replaced because the insulation contains refractory ceramic fibre (the product is considered carcinogenic).

14.2 Reference

14.2.1 Reference documents:

- 20180501_094837
- PYROSTOP_BLANKET_128_1260 (fibre de céramqiue)

14.3 Technical description

14.3.1.1 The Contractor shall provide ISOTEX-FHP1800 insulating covers, or equivalent.

14.3.1.2 Refractory ceramic fibre-based insulation is not accepted, because it is a carcinogen. It is the Contractor's responsibility to take the necessary measures to protect employees and crew members.

14.3.1.3 The Contractor must certify in writing that the insulation contains no refractory ceramic fibre and must provide the insulation's data sheet.

14.3.1.4 The recommended usage temperature for the new covers must be between 260 °C and 649 °C.

14.3.1.5 The new covers must be held in place using stainless steel hooks and gauge 14 pins with an 8-lb fracture resistance.

14.3.1.6 High-performance fibreglass insulation must have a minimum density of 128 kg/m³. The insulation must allow for service temperatures up to 1300 °C and be 2 inches thick. The insulation must be made of biosoluble fibre.

14.3.1.7 The external material is 16.5 oz grey fluorocarbon-treated fibreglass covered in Teflon to make it impervious to fuel. The material's temperature resistance must be a minimum of 315 °C.

14.3.1.8 The interior material must be 18 oz tan silica + stainless steel mesh. The material's temperature resistance must be at least 982 °C, with a melting point of 1648 °C.

14.3.1.9 18 oz silica material must be used around the circumference.

14.3.1.10 The Contractor shall supply the material and labour to remove the old covers and install new covers on the engines. The Contractor shall bring appropriate personal protective equipment to remove the old covers containing refractory ceramic fibre. The Contractor shall remove dust created by replacing the old covers using a damp cloth and HEPA-filter fan to stop the dust from spreading.

Item 12 – Section 15 – Mooring winches maintenance, of the Statement of Work, of the Invitation to Tender

Insert section 10 – Mooring winches maintenance, to the Statement of Requirement, of the Invitation to Tender as follow:

15 MOORING WINCHES MAINTENANCE

15.1 Scope of work

15.1.1.1 The Contractor shall perform maintenance work of the mooring winch steel structure.

15.2 Reference

15.2.1 Reference documents:

- Mooring winches DWG

15.3 Technical description

15.3.1.1 Provide the material and labour to replace plates damaged by rust on the fore port and starboard mooring winch and replace oil seals on the shaft.

15.3.1.2 Remove the winch gipsy to access the damaged plate behind the gipsy. Sandblast the gipsy clean to meet standard SA 2.

15.3.1.3 Paint the capstan by brush according to the following requirements (paint will be supplied by the CCG):

15.3.1.3.1 Two coat of Intershield bronze primer, 6 mils DFT

15.3.1.3.2 One coat of buff Interthane 990, 3 mils DFT

15.3.1.4 Remove plates and replace them with new plates and seals provided by the CCG.

15.3.1.5 Replace the oil seals and reassemble all of the pieces with the new plate.

15.4 Proof of performance

15.4.1 Trials

15.4.1.1 The contractor shall perform running test of the winches to demonstrate proper operation.

Item 13 – Section 16 – Alternator collector machining, of the Statement of Work, of the Invitation to Tender

Insert section 16 – Alternator collector machining, to the Statement of Requirement, of the Invitation to Tender as follow:

16 ALTERNATOR COLLECTOR MACHININING

16.1 Scope of work

16.1.1.1 The work consists of machining the alternator collector ring to refurbish the brush contact area.

16.2 Reference

16.2.1 Reference documents:

- Generator DWG
- Photos 2

16.3 Technical description

16.3.1 Generality:

16.3.1.1 Supply the parts and labour (specialized technicians) to work on direct current rotating machines to machine a collector ring on the alternator of diesel engine #2 (starboard diesel engine before the forward engine room).

16.3.1.2 The ring to be machined is located near the inside of the alternator's brush compartment. The ring is made of a stainless-steel alloy.

16.3.1.3 The machining could be carried out using the driving force of the diesel engine.

16.3.1.4 The work will be carried out in coordination with the Chief Engineer, who will be on board.

16.3.1.5 For bidding consideration, the manifold diameter is 12 inches and the length to be machine is 8 inches. The depth of the surface to be rectified is 0.125 inches.

16.4 Proof of performance

16.4.1 Trials

16.4.1.1 The contractor must perform running test with the assistance of CCG to demonstrate that the collector ring is working properly without sparks or anomalies that could damage the brush or the collector ring.

16.5 Option

16.5.1.1 The contractor must provide a price for the machining of 5 optional alternator collector rings

Item 14 – Appendix 1 of Annex I – Price per Item Sheet

Eliminate Appendix 1 of Annex I – Pricing Per Item Sheet of the Invitation to Tender and **replace it with** the following:

APPENDIX 1 OF ANNEX I

SCHEDULED KNOWN WORK:

PRICE PER ITEM SHEETS		
Item	**Description – A) SCHEDULED WORK**	**Firm Price**
1	**GENERAL**	_____$
2	**PRODUCTION DIAGRAM**	_____ $
3	**PROPULSION DIESEL ENGINE #4 RECOMMISSIONING (Excluding Known Optional Work)**	_____ $
4	**ELECTRICAL WIRING PENETRATION CHECKS**	_____ $
5	**REPAIR OF A BULKHEAD PENETRATION**	_____ $
6	**MIRANDA DAVIT 5-YEAR INSPECTION**	_____ $
7	**ACCOMMODATION LADDERS' 5-YEAR INSPECTION**	_____ $
8	**BARGE DAVIT'S 5-YEAR INSPECTION**	_____ $
9	**STORAGE UNDER THE WHEELHOUSE**	_____ $
10	**FIVE-YEAR INSPECTION OF THE MAIN PROPULSION CIRCUIT BREAKERS**	_____ $
11	**REMOVAL OF INSULATION CONTAINING ASBESTOS**	_____ $
12	**ADDING A LINE ON THE CONDENSATE RETURN**	_____ $
13	**REPLACEMENT OF 2 CIRCUIT BREAKERS**	_____ $
14	**REPLACEMENT OF ENGINES EXHAUST COVERS**	_____ $
15	**MOORING WINCHES MAINTENANCE**	_____ $
16	**ALTERNATOR COLLECTOR MACHINING**	_____ $
	A) SCHEDULED WORK - TOTAL FIRM PRICE	_____$

OPTIONAL KNOWN WORK:

PRICE PER ITEM SHEETS		
Item	**Description – B) OPTIONAL WORK**	**Firm Price**
3	**SUPPLY OF OPTIONAL WALL PANELS ONLY**	_____ **$**
	OPTIONAL MACHINING WORK ONLY	_____ **$**
16	**MACHINING WORK FOR 5 OPTIONAL COLLECTORS**	_____ **$**
	B) OPTIONAL WORK - TOTAL FIRM PRICE	_____**$**

Note: PWGSC reserves the right to exercise all the options or partial options.

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex A of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment. The Contracting Authority may exercise the option within **15 working days** prior beginning of subject work by sending a written notice to the Contractor.

SUMMARY:

TOTAL A SCHEDULED WORK	TOTAL B OPTIONAL WORK	TOTAL C FIRM BID PRICE
_____**$**	_____**$**	_____**$**

Remark to Bidders:

Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

Item 15 – Annex J – Pricing Data Sheet

Eliminate Annex J – Pricing Data Sheet, of the Invitation to Tender and **replace it with** the following:

ANNEX J

PRICING DATA SHEETS

Scheduled Work:

PRICING DATA SHEETS			
Item	**Description – A) SCHEDULED WORK**		**Firm Price**
1	**GENERAL** (Bidders can enter $0.00 or indicate 'included' if the fees for this item are distributed in each of the items bellow. In case the fees are not distributed an amount must be indicated in the price box.)		**$**_____
2	**PRODUCTION DIAGRAM** Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item:**		**$**_____
3	**PROPULSION DIESEL ENGINE #4 RECOMMISSIONING**		
	3.1 – Scope, 3.2 – Reference Documents & 3.4 – Proof of performance (Overheads fees related to this item must be distributed in each sub items.)		
	3.3 – Technical Description		
	3.3.1 General description (Overheads fees related to this item must be distributed in each sub items.)		
	3.3.2 – Engineering Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for item 3.3.2 :**	**$** _____	
	3.3.3 – Field Service Representative from the Original Equipment Manufacturer of ALCO Engine Mobilization / demobilization = $ _____ Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for item 3.3.3 :**	**$** _____	

PRICING DATA SHEETS			
Item	**Description – A) SCHEDULED WORK**		**Firm Price**
	3.3.4 – Disassembly and reassembly of equipment (Excluding steel work as well as optional work) Mobilization / demobilization = $ _____		
	Disassembly and reassembly of cabins fixed furniture Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of wall panels (Excluding the optional supply of panels) Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Protection of wall and floors Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of thermal insulation Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly A-60 insulation (floors) Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Demolition of floor covering Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Installation of new floor covering Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		

PRICING DATA SHEETS			
Item	**Description – A) SCHEDULED WORK**		**Firm Price**
	Disassembly and reassembly of ventilation ducting Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of lighting and electric cables Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of doors Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of lifting beams Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of exhaust pipes Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Disassembly and reassembly of engine Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Verification of flatness and straightness of the engine block Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Laser inspection of the crankshaft alignment Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Total for item 3.3.4 - Disassembly and reassembly of equipment: (Excluding steel work as well as optional work)	**$** _____	

PRICING DATA SHEETS			
Item	**Description – A) SCHEDULED WORK**		**Firm Price**
	3.3.4 – Steel Work Mobilization / demobilization = $ _____ Welding procedures = $ _____ **Total for this item : $** _____		
	Cutting, removal and closing of opening in the hull Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Sandblasting and painting of hull Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Cutting, removal and reinstallation of Main deck Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Sandblasting and painting of Main deck Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Installation and removal of lifting and handling supports Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Sanding and painting of lifting and handling supports Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $** _____		
	Non-destructive tests Cost of tests = $ _____		
	Total for item 3.3.4 – Steel Work :	**$** _____	

PRICING DATA SHEETS			
Item	**Description – A) SCHEDULED WORK**		**Firm Price**
	3.3.5 – Services Mobilization / demobilization = $ _____		
	Temporary power and lighting Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	Temporary scaffolding and sheltering Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	Ventilation Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	External lifting (cranes) Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	Internal lifting (Chain blocks and trolleys) Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	Transport and handling Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	Transport and disposal of Asbestos Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for this item : $ _____**		
	Total for item 3.3.5 – Services:	**$ _____**	
	Total for item 3 :		**$_____**

PRICING DATA SHEETS		
Item	**Description – A) SCHEDULED WORK**	**Firm Price**
4	**ELECTRICAL WIRING PENETRATION CHECK** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X 120 hour = $ _____ **Total for item 4 :**	**$**_____
5	**REPAIR OF A BULKHEAD PENETRATION** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 5 :**	**$**_____
6	**MIRANDA DAVIT 5-YEAR INSPECTION** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 6 :**	**$**_____
7	**ACCOMMODATION LADDERS' 5-YEAR INSPECTION** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 7 :**	**$**_____

PRICING DATA SHEETS		
Item	**Description – A) SCHEDULED WORK**	**Firm Price**
8	**BARGE DAVIT'S 5-YEAR INSPECTION** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 8 :**	**$**_____
9	**STORAGE UNDER THE WHEELHOUSE** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 9 :**	**$**_____
10	**FIVE-YEAR INSPECTION OF THE MAIN PROPULSION CIRCUIT BREAKERS** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 10 :**	**$**_____

PRICING DATA SHEETS		
Item	**Description – A) SCHEDULED WORK**	**Firm Price**
11	**REMOVAL OF INSULATION CONTAINING ASBESTOS** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 11 :**	**$**_____
12	**ADDING A LINE ON THE CONDENSATE RETURN** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 12 :**	**$**_____
13	**REPLACEMENT OF 2 CIRCUIT BREAKERS** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 13 :**	**$**_____

PRICING DATA SHEETS		
Item	**Description – A) SCHEDULED WORK**	**Firm Price**
14	**REPLACEMENT OF ENGINES EXHAUST COVERS** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 14 :**	**$**_____
15	**MOORING WINCHES MAINTENANCE** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 15 :**	**$**_____
16	**ALTERNATOR COLLECTOR MACHINING** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Total for item 16 :**	**$**_____
	TOTAL A) FIRM PRICE FOR SCHEDULED WORK =	**$**_____

Optional Work:

PRICING DATA SHEETS			
Item	**Description – B) OPTIONAL WORK**		**Firm Price**
3	**PROPULSION DIESEL ENGINE #4 RECOMMISSIONING** (Optional work only)		
	3.3.4 – Supply of optional wall panels Unit Price; $ _____ /panel X 12 panels =	**$** _____	
	3.3.4 – Optional machining Work Mobilization / demobilization = $ _____		
	Machining the head of the block (flatness) Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for item : $** _____		
	Boring of the crankshaft Materials, equipment and consumables = $ _____ Labour ; $ _____ /hour X _____ hours = $ _____ **Total for item : $** _____		
	Total for Optional machining Work for item 3:	**$** _____	
	OPTIONAL ALTERNATOR COLLECTOR MACHINING Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ **Subcontractor :** Mobilization / demobilization = $ _____ Material, equipment & consumables = $ _____ Labour; $ _____/hour X _____ hours = $ _____ Total for a collector = $ _____ **Total price (Optional item 16) :** _____ **X 5 collectors =**	**$**_____	
	TOTAL B) FIRM PRICE FOR OPTIONAL WORK =		**$**_____

Remark to Bidders:

Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

Item 16 –Annex K – Technical Bid Presentation sheet

Eliminate Annex K – Technical Bid Presentation Sheet, of the Invitation to Tender and **replace it with** the following:

ANNEX "K"

Technical bid presentation sheet

Id.	Description	Technical references within the bid documents (page #, paragraph, etc.)
Technical Bid (this annex is part of the Technical Bid)		
4.1.3 5)	Provide Technical Bid in accordance with Annex K – Mandatory Technical Evaluation Criteria Presentation Sheets	
	Equivalent Product	
	Roxul RHT 60 insulation or equivalent **(Section 3.3.4.14 of the Technical Statement of Work)**	**To provide at bid closing**
		Proposed Make: _____ Proposed Model: _____
		To provide within two (2) working days after written request
		- Demonstration that the thermal resistance of the proposed insulation is equal or above 0.75 m²K/W. - Demonstration that the flash point of the proposed insulation is at least 1177 °C.
	New wall covering Ayrlite 2054 or equivalent **(Section 3.3.4.16 of the Technical Statement of Work)**	**To provide at bid closing**
		Proposed Make: _____ Proposed Model: _____
		To provide within two (2) working days after written request
		- Demonstration that proposed wall panels are approved by a Class Society recognized by the DSIP*. - Demonstration that proposed panels can sustain a charge of 2697 Newton on the length (*long beam*) for panels of 0.8 in thick.

	Armstrong Tiles, model Excellon or equivalent **(Section 3.3.4.17 of the Technical Statement of Work)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed tiles are certified as per the « Application of Fire test procedures », 2010 IMO code.
	Armstrong Vinyl, model Premium G 6210 or equivalent **(Section 3.3.4.18 of the Technical Statement of Work)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed Vinyl is certified as per the « Application of Fire test procedures », 2010 IMO code.
	CTRL UL 101 or equivalent **(Section 4.3.1.3 of the Technical Statement of Work)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed equipment is certified to operate at a frequency from 1.8 to 2.2 kHz
	Interzinc 52 paint or equivalent **(Sections 6.3.1.6; 7.3.1.8 & 8.3.1.12 of the Technical Statement of Requirement)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed paint is chemically compatible with the current paint system (Interzinc 52)

	Interseal 264 paint or equivalent **(Sections 6.3.1.6, 7.3.1.8 & 8.3.1.12 of the Technical Statement of Requirement)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed paint is chemically compatible with the current paint system (Intergard 264)
	Interthane 990 paint or equivalent **(Sections 6.3.1.6; 7.3.1.8 & 8.3.1.12 of the Technical Statement of Requirement)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed paint is chemically compatible with the current paint system (Interthane 990)
	Earthwool 1000º Pipe Insulation or equivalent **(Sections 11.3.1.3 & 12.3.1.9 of the Technical Statement of Requirement)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the proposed insulation has a fluid temperature of 201-250°F. - Demonstration that the proposed insulation has a conductivity range of 0.27-0.30 BTU-in./ (hr.ft².°F).

	ISOTEX_FHP1800 Insulation Covers or equivalent **(Section 14.3.11 of the Technical Statement of Requirement)**	**To provide at bid closing** Proposed Make: _____ Proposed Model: _____ **To provide within two (2) working days after written request** - Demonstration that the recommended usage temperature for the proposed insulation cover is between 260°c et 649°c. - Demonstration that the proposed insulation is made of fibreglass insulation must have a minimum density of 128 kg/m³. - Demonstration that the proposed insulation cover allow for service temperatures up to 1300 °C. - Demonstration that the proposed insulation cover material's temperature resistance is a minimum of 315 °C. - Demonstration that the proposed insulation cover material's temperature resistance is at least 982 °C, with a melting point of 1648 °C.

***** Delegated Statutory Inspection Program (DSIP) – Policy
https://www.tc.gc.ca/eng/marinesafety/tp-tp13585-policy-menu-3501.htm

All other terms and conditions of the invitation to tender remain the same.