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K1A 0S5

Bid Fax: (819) 997-9776

**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

Marine Machinery and Services / Machineries et
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11 Laurier St. / 11, rue Laurier

6C2, Place du Portage

Gatineau

Québec

K1A 0S5

Title - Sujet CCGS Samuel Risley Axial Fan	
Solicitation No. - N° de l'invitation F2599-195006/A	Amendment No. - N° modif. 003
Client Reference No. - N° de référence du client F2599-195006	Date 2019-05-17
GETS Reference No. - N° de référence de SEAG PW-\$\$ML-062-27280	
File No. - N° de dossier 062ml.F2599-195006	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-05-27	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:	

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

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Solicitation Amendment 003 is raised to respond to Bidder's questions, and amend Annex "A" Requirement, Annex "B" Basis of Payment and Annex "E" Mandatory Technical Criteria, as follows:

Q5:

Engine Room Supply

We can manufacture a 30" diameter fan to meet the requested rating.

We cannot provide the tube length of 9". Standard tube length would be approximately 22". We may be able to provide slightly shorter than this. Please advise if 22" would work or provide alternate length.

A5:

Yes size would work, please see changes to Annex "E" Mandatory Technical Criteria below.

Q6:

Engine Room Exhaust

We can manufacture a 30" diameter fan to meet the requested rating.

We cannot provide the tube length of 9". Standard tube length would be approximately 22". We may be able to provide slightly shorter than this. Please advise if 22" would work or provide alternate length.

A6:

Yes size would work, please see changes to the solicitation below.

Q7:

Main Deck Supply

Based on the information we have, Myson did not have a 19" fan to meet the static pressure of 1.61" We could potentially add vanes to a standard 19" 4 pole fan to achieve the pressure, however, the tube length would increase by approximately 8" to (total 23") to add the vanes. Alternatively we could provide two fans contra rotating to achieve the rating, however, the cost and length would both essentially double. See also questions 8 & 9 below with the exception of the BHP – please clarify: the rating for 4/5/6 is the same, however, the BHPs differ.

A7:

Data was taken from nameplates.

Yes size would work, please see changes to the solicitation below.

Q8:

Boat Deck Supply

Based on the information we have, Myson did not have a 19" fan to meet the static pressure of 1.61" We could potentially add vanes to a standard 19" 4 pole fan to achieve the pressure, however, the tube length would increase by approximately 8" to (total 23") to add the vanes. Alternatively we could provide two fans contra rotating to achieve the rating, however, the cost and length would both essentially double. See also questions 7 above & 9 below with the exception of the BHP – please clarify: the rating for 4/5/6 is the same, however, the BHPs differ.

A8:

Yes size would work, please see changes to the solicitation below.

Q9:

Emergency Gen Supply

Based on the information we have, Myson did not have a 19" fan to meet the static pressure of 1.61" We could potentially add vanes to a standard 19" 4 pole fan to achieve the pressure, however, the tube length

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would increase by approximately 8" to (total 23") to add the vanes. Alternatively we could provide two fans contra rotating to achieve the rating, however, the cost and length would both essentially double. See also questions 7 & 8 above with the exception of the BHP – please clarify: the rating for 4/5/6 is the same, however, the BHPs differ.

A9:

Yes size would work, please see changes to the solicitation below.

Q10:

Focsule Deck Supply

We can manufacture a 15" diameter fan to meet the requested rating and tube length. The fan would not include vanes as the Myson model number appears to imply.

A10:

No vanes are acceptable provided the fan meets the other criteria.

Q11:

Galley Exhaust

We can manufacture a 15" diameter fan to meet the requested rating. The fan would include vanes as the Myson model number implies, and because of this, the tube length would be approximately 20". The max sound level seems to be incorrect. This fan runs at 3600 RPM, so the sound level would be more like 95 dBA.

A11:

Yes size would work, please see changes to the solicitation below. Sound level is acceptable as the fan will be located outside.

Q12:

Deck Workshop Supply

Based on the model number shown, implied fan diameter is 15", however, diameter is shown as 12.25". We would suggest two 15" diameter fans contra rotating to achieve the rating. Total tube length would be 30" as requested. Alternatively, a single 12" diameter fan running at 3600 RPM could achieve the rating, and the tube could be lengthened to 30" to fit. The 0.05 BHP shown does not appear to be correct. Please clarify.

Q12:

Yes this would work. Exact BHP is not critical.

Q13:

MCR Supply

Diameter shows 12.25", however, a static pressure is not provided. We can provide a single 12" diameter fan running at 1800 RPM to achieve the 1000 cfm flow at static pressure up to 0.4". BHP would be around 0.13 BHP. Tube could be fabricated to meet your shown length of 26". Alternatively, we can provide a single 12" diameter fan with vanes running at 1800 RPM to achieve the 1000 cfm flow at static pressure up to 0.55". BHP would be around 0.17 BHP. We could also look a single 12" diameter fan running at 3600 RPM to achieve the 1000 cfm flow at static pressure up to around 1.4". Please clarify/advise.

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A13:

The second option, single 12" diameter fan with vanes running at 1800 RPM to achieve the 1000 cfm at static pressure up to 0.55", is preferred, but any of the stated options which meet the mandatory criteria are acceptable.

Q14:

Toilet Exhaust

Based on the information provided we could provide two 19" fans contra rotating to achieve the rating and the total tube length.

See also items 4, 5 & 6 above with the exception of the BHPs as the ratings appear to be the same, however, only this toilet fan was shown as two fans contra rotating in series.

A14:

Exact BHPs not critical.

Q15:

Dry Stores Supply

Information shown implies two 12" 1800 RPM fans contra rotating in order to achieve the rating. We can provide this and meet the overall tube length of 30". Alternatively, we could provide a single 12" diameter fan running at 3600 RPM to achieve the 1236 cfm at 0.75" rating. BHP for the 3600 RPM fan would be around 0.5 BHP and we would utilize a 0.75 HP motor for this. Tube could be fabricated to meet your shown length of 30". Please clarify/advise.

A15:

The first option, two 12" 1800 RPM fans contra rotating, is preferred, but any of the stated options which meet the mandatory criteria are acceptable.

Q16:

Please advise if two speed motors, where requested, are to be single winding or double winding.

A16:

Double winding.

Q17:

Please advise preferred protective coating for aluminum hubs/blades.

A17:

Protective coating suitable for a marine environment are preferred.

Q18:

Any photos you can provide of complete existing fans (including nameplates) may be helpful.

A18:

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Figure 1: Photograph of in-situ engine room supply axial fan.



Figure 2: Photograph of in-situ engine room exhaust axial fan.



Figure 3: Photograph of in-situ ME supply axial fan.



Figure 4: Photograph of in-situ main deck supply axial fan.



Figure 5: Photograph of in-situ boat deck supply axial fan.



Figure 6: Photograph of in-situ emergency generator supply axial fan.



Figure 7: Photograph of in-situ focsule deck supply axial fan.



Figure 8: Photograph of in-situ galley exhaust axial fan.



Figure 9: Photograph of in-situ deck workshop supply axial fan.



Figure 10: Photograph of in-situ MCR supply axial fan.

The revisions to the Solicitation are as follows:

(1) In Annex "A" Requirement, Section 1.2.8 Galley Exhaust Fan, page 4 of 7:

DELETE:

1.2.8.1 Existing one (1) Exhaust Fans with the following specifications;

- Myson Model # 15GVP
- Length of tube; 15"
- Diameter of tube OD; 15"
- Flange Diameter OD; 17.8"
- 1 Speed control
- Voltage; 575 VAC / 3 phase / 60 Hz
- Amperage; 2.35
- Break HP; 1.34
- Static Pressure (INS); 2.5
- CFM: 2125 (HI)
- Max Sound level 80 dB

REPLACE with:

1.2.8.1 Existing one (1) Exhaust Fan with the following specifications;

- Myson Model # 15GVP
- Length of tube; 15"
- Diameter of tube OD; 15"
- Flange Diameter OD; 17.8"
- 1 Speed control
- Voltage; 575 VAC / 3 phase / 60 Hz
- Amperage; 2.35
- Break HP; 1.34
- Static Pressure (INS); 2.5
- CFM: 2125 (HI)

(2) In Annex "B" Basis of Payment, page 23 of 32:

DELETE: Tube length for items:

- 1) Engine Room Supply Tube
- 2) Engine Room Exhaust Tube
- 4) Main Deck Supply Tube Length
- 5) Boat Deck Supply Tube Length
- 6) Emergency Gen. Supply Tube Length
- 8) Galley Exhaust Tube Length

REPLACE with: The following tube lengths:

- 1) Engine Room Supply Tube length 9 – 22" accepted
- 2) Engine Room Exhaust Tube length 9 – 22" accepted
- 4) Main Deck Supply Tube Length 15" – 23" accepted
- 5) Boat Deck Supply Tube Length 15" – 23" accepted
- 6) Emergency Gen. Supply Tube Length 15" - 23" accepted
- 8) Galley Exhaust Tube Length 15" – 20" accepted

(3) In Annex "E" Mandatory Technical Criteria, M1, page 30 of 32:

DELETE:

M1 The Bidder must demonstrate that the offered fans are equivalent in form, fit, function and quality to the existing equipment found in Annex "A" – Requirement.

REPLACE with:

M1 The Bidder must demonstrate that the offered fans are equivalent in form, fit, function and quality to the existing equipment found in Annex "A" – Requirement. The exact BHP values for the fans are not critical and tube lengths of the fans must be within the following tolerances:

- 1) Engine Room Supply Tube length 9 – 22" accepted
- 2) Engine Room Exhaust Tube length 9 – 22" accepted
- 3) ME Supply Tube Length 26.0625" exact total length
- 4) Main Deck Supply Tube Length 15" – 23" accepted
- 5) Boat Deck Supply Tube Length 15" – 23" accepted
- 6) Emergency Gen. Supply Tube Length 15" - 23" accepted
- 7) Focsule Deck Supply Tube length 15" exact total length
- 8) Galley Exhaust Tube Length 15" – 20" accepted
- 9) Deck Workshop Supply Tube Length 30" exact total
- 10) MCR Supply Tube Length 26" exact
- 11) Toilet Exhaust Tube Length 30" exact total length
- 12) Dry Stores Supply Tube Length 30" exact total length

(4) In Annex "E" Mandatory Technical Criteria, page 30 of 32:

ADD:

M10 The two speed motors must be double winding.

The Basis of Payment Table in Annex "B" Basis of Payment is now as follows:

Item #	Description	Unit Price (\$ / unit)	Quantity	Extended Price (\$)
1	Axial supply fan for engine room: <ul style="list-style-type: none"> • Tube: length 9 - 22", outer diameter 30" • Flange: outer diameter 34.25" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: <ol style="list-style-type: none"> 1. 8.5 AMPS 2. 1.6 AMPS • Brake Horsepower: <ol style="list-style-type: none"> 1. 7.78 BHP 2. 0.97 BHP • Static pressure: 1.84 INS • Cubic feet per minute: 12920 (High) • Max sound level: 100 dB Documentation		2	
2	Axial exhaust fan for the engine room: <ul style="list-style-type: none"> • Tube: length 9 - 22", outer diameter 30" • Flange: outer diameter 34.25" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: <ol style="list-style-type: none"> 1. 4.3 AMPS 2. 2.0 AMPS • Brake Horsepower: <ol style="list-style-type: none"> 1. 2.4 BHP 2. 0.33 BHP • Static pressure: 0.415 INS • Cubic feet per minute: 12920 (High) • Max sound level: 100 dB Documentation		2	
3	Axial supply fan for ME: <ul style="list-style-type: none"> • Tube: length 26.0625", outer diameter 30" • Flange: outer diameter 34.25" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: <ol style="list-style-type: none"> 1. 7.8 AMPS 2. 1.6 AMPS • Brake Horsepower: <ol style="list-style-type: none"> 1. 7.14 BHP 2. 0.89 BHP • Static pressure: 1.36 INS • Cubic feet per minute: 12920 (High) 		2	

	<ul style="list-style-type: none"> • Max sound level: 100 dB Documentation			
4	Axial supply fan for the main deck: <ul style="list-style-type: none"> • Tube: length 15 - 23", outer diameter 19" • Flange: outer diameter 22.5" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: <ol style="list-style-type: none"> 1. 2.05 AMPS 2. 0.5 AMPS • Brake Horsepower: <ol style="list-style-type: none"> 1. 1.0 BHP 2. 0.13 BHP • Static pressure: 1.61 INS • Cubic feet per minute: 2638 (High) • Max sound level: 85 dB Documentation		1	
5	Axial supply fan for the boat deck: <ul style="list-style-type: none"> • Tube: length 15 - 23", outer diameter 19" • Flange: outer diameter 22.5" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: <ol style="list-style-type: none"> 1. 2.05 AMPS 2. 0.5 AMPS • Brake Horsepower: <ol style="list-style-type: none"> 1. 0.62 BHP 2. 0.08 BHP • Static pressure: 1.61 INS • Cubic feet per minute: 2683 (High) • Max sound level: 85 dB Documentation		1	
6	Axial supply fan for the emergency generator: <ul style="list-style-type: none"> • Tube: length 15 - 23", outer diameter 19" • Flange: outer diameter 22.5" • 1 speed control • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: 2.05 AMPS • Brake Horsepower: 0.62 BHP • Static pressure: 1.61 INS • Cubic feet per minute: 2683 (High) • Max sound level: 86 dB Documentation		1	
7	Axial supply fan for the focsule deck: <ul style="list-style-type: none"> • Tube: length 15", outer diameter 15" • Flange: outer diameter 17.8" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz 		1	

	<ul style="list-style-type: none"> • Amperage: <ol style="list-style-type: none"> 1. 1.2 AMPS 2. 0.32 AMPS • Brake Horsepower: <ol style="list-style-type: none"> 1. 0.22 BHP 2. 0.03 BHP • Static pressure: 0.54 INS • Cubic feet per minute: 1600 (High) • Max sound level: 80 dB Documentation			
8	Axial exhaust fan for the galley: <ul style="list-style-type: none"> • Tube: length 15 - 20", outer diameter 15" • Flange: outer diameter 17.8" • 1 speed control • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage: 2.35 AMPS • Brake Horsepower: 1.34 BHP • Static pressure: 2.5 INS • Cubic feet per minute: 2125 (High) Documentation		1	
9	Axial supply fan for deck workshop: <ul style="list-style-type: none"> • Tube: length 15" per section and 30" total length, outer diameter 12.25" • Flange: outer diameter 14.8" • Tandem speed • Voltage: 120 VAC / 1 phase / 60 Hz • Amperage: 40 AMPS • Brake Horsepower: 0.05 BHP • Static pressure: 0.809 INS • Cubic feet per minute: 1234 (High – Both stages combined) • Max sound level: 80 dB Documentation		2	
10	Axial supply for MCR: <ul style="list-style-type: none"> • Tube: length 26", outer diameter 12.25" • Flange: outer diameter 14.8" • 1 speed control • Voltage: 120 VAC / 1 phase / 60 Hz • Amperage: 7.5 AMPS • Brake Horsepower: 0.5 BHP • Static pressure: • Cubic feet per minute: 1000 (High) • Max sound level: 70 dB Documentation		1	
11	Axial exhaust fan for the toilet: <ul style="list-style-type: none"> • Tube: length 15" each and 30" total, outer diameter 19" 		2	

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	<ul style="list-style-type: none"> • Flange: outer diameter 22.5" • 2 speed control (1 and 2) • Voltage: 575 VAC / 3 phase / 60 Hz • Amperage (combined): <ol style="list-style-type: none"> 1. 2.05 AMPS 2. 0.58 AMPS • Brake Horsepower (combined): <ol style="list-style-type: none"> 1. 1.0 BHP 2. 0.13 BHP • Static pressure: 1.61 INS • Cubic feet per minute: 3288 (High - Combined) • Max sound level: 90 dB Documentation			
12	Axial supply fan for the dry stores: <ul style="list-style-type: none"> • Tube: length 15" per section and 30" combined, outer diameter 12" • Flange: outer diameter 14.8" • 1 speed control • Voltage: 115 VAC / 1 phase / 60 Hz • Amperage (combined): 4.0 AMPS • Brake Horsepower (combined): 0.16 BHP • Static pressure: 0.75 INS • Cubic feet per minute: 1236 (High - Combined) • Max sound level: 80 dB Documentation		2	
Sub-Total				
Taxes (13%)				
Total				

The Mandatory Criteria Table in Annex “E” Mandatory Technical Criteria is now as follows:

Mandatory Item	Description	Compliant	
		Yes	No
M1	<p>The Bidder must demonstrate that the offered fans are equivalent in form, fit, function and quality to the existing equipment found in Annex “A” – Requirement. The exact BHP values for the fans are not critical and tube lengths of the fans must be within the following tolerances:</p> <ol style="list-style-type: none"> 1) Engine Room Supply Tube length 9 – 22” accepted 2) Engine Room Exhaust Tube length 9 – 22” accepted 3) ME Supply Tube Tube Length 26.0625” exact total length 4) Main Deck Supply Tube Length 15” – 23” accepted 5) Boat Deck Supply Tube Length 15” – 23” accepted 6) Emergency Gen. Supply Tube Length 15” - 23” accepted 7) Focsule Deck Supply Tube length 15” exact total length 8) Galley Exhaust Tube Length 15” – 20” accepted 9) Deck Workshop Supply Tube Length 30” exact total 10) MCR Supply Tube Length 26” exact 11) Toilet Exhaust Tube Length 30” exact total length 12) Dry Stores Supply Tube Length 30” exact total length 		
M2	The Bidder must demonstrate that the offered fans are direct drive tube axial fans.		
M3	The Bidder must demonstrate that the offered fans have housings of heavy duty, marine type construction with hot dipped galvanized steel.		
M4	The Bidder must demonstrate that the offered fans have aluminum propellers with airfoil blades and the propeller hubs are aluminum with a protective coating suitable for a marine environment.		
M5	The Bidder must demonstrate that the offered fans have stainless steel hardware used for the fan assembly.		
M6	The Bidder must demonstrate that the offered fans have welded, undrilled inlet and outlet flanges.		
M7	The Bidder must demonstrate that the offered fans have junction boxes that have IP 56 class protection and are mounted on the exterior of the fan housing with factory wired connection to the motor.		
M8	The Bidder must demonstrate that the offered fans have sealed bearings.		
M9	The Bidder must demonstrate that the offered fans are suitable for operation in temperatures from -40°C to 45°C.		

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M10	The two speed motors must be double winding.		
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