GA BIDS AND AWARDS COMMITTEE

Supplemental Bulletin Nr GA-BAC-PMFE-18-01

Procurement Project on the Preventive Maintenance of Fabrication Equipment
GA-BAC-2018-IA-18
9 October 2018

1. This is to inform all prospective bidders for the Procurement Project on the Preventive Maintenance of Fabrication Equipment for the amendment on the bidding document, to wit;

Technical Specifications

<table>
<thead>
<tr>
<th>Item No.</th>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>EDM Drill, Ocean – CCT3525ZA</td>
<td>EDM Drill, Ocean – OCT3525ZA</td>
</tr>
<tr>
<td>4</td>
<td>CNC Milling Machine</td>
<td>CNC Milling Machine (Finetech SMV 610 H3L)</td>
</tr>
<tr>
<td>5</td>
<td>Vacuum Furnace</td>
<td>Vacuum Furnace (TAV TPF – 30/30/45 HP)</td>
</tr>
</tbody>
</table>

2. Bidders are hereby instructed to use the attached Revised Technical Specifications (pages 75-79) and Revised Bid (page 84) during the submission and opening of bids.

3. Please be guided accordingly.

[Signature]

MS. TERESITA L. VITUG
Chairperson, Bids & Awards Committee
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
<th>COMPLY / NOT COMPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>EDM Drill, Ocean-OCT3525ZA</td>
<td>1</td>
<td>unit</td>
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</tbody>
</table>

Scope of Work:

a. Perform detailed maintenance program as per machine manufacturer and provide preventive maintenance checklist during project implementation

b. Conduct ocular inspection of visually accessible parts/ components

c. Inspection of way covers and mating slide way for proper operation and lubrication

d. Checking of the following:
   - all hoses and lubrication lines for cracking
   - oil filters and clean out residue at bottom of filter

e. Perform functional test and check for potential defects

f. List down replacement of potential defective parts

g. Lubricate the components when necessary and applicable

h. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost

i. Perform general cleaning of machine to include electrical cabinets and machine parts

Signature Over Printed Name of Bidder
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<tr>
<td>4.</td>
<td>CNC Milling Machine (Finetech SMV 610 H3L)</td>
<td>1</td>
<td>unit</td>
<td></td>
</tr>
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</table>

**Scope of Work:**

a. Perform detailed maintenance program as per machine manufacturer and provide preventive maintenance checklist during project implementation.

b. Checking, troubleshooting and evaluation of the following:
   - electrical and electronic system
   - fault and errors of the control system

c. Checking and cleaning of the following:
   - spindle cone and lubrication
   - spindle drawbar
   - automatic tool charger and tool pot for alignment and clean and grease roller
   - active and passive machine components
   - support bearing ball nut for x, y and z axis
   - linear guide for x, y and z axis
   - coolant tank

d. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost

e. Accuracy check and machine leveling

f. Perform general cleaning of machine

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Signature Over Printed Name of Bidder

Revised Technical Specs
## TECHNICAL SPECIFICATIONS
(Revised)

<table>
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<td>5.</td>
<td>Vacuum Furnace (TAV TPF – 30/30/45 HP)</td>
<td>1</td>
<td>unit</td>
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### Scope of Work:

**A. Furnace Interior and Exterior**

a. Perform detailed maintenance program as per machine manufacturer and provide preventive maintenance checklist during project implementation

b. Checking of the following:
   - all safety interlocks to ensure they are functioning
   - deterioration of thermocouples

c. Inspect hot zone ceramic insulators for any deposits that could cause an unwanted drain of power to ground that would affect the heating schedule

d. Clean the chamber of all foreign matter. Depending on the rate dirt accumulation, clean the furnace
   - Brush or blow dirt out with clean, dry air
   - Wipe inner chamber surfaces using a lint free cloth dampened with suitable solvent
   - On furnaces with an epoxy coating on the inside of the chamber and bottom head, use denature isopropyl or butyl alcohol for cleaning

e. Remove dirt and dust from the front of the control cabinet and clean all glass

**B. Transformers**

a. Checking of the following:
   - transformer and power terminal connections for tightness
   - electrical connections to power feed through bars for tightness

b. Inspection of the following:
   - all lines, fittings and connections of backfill gases from point of origin to backfill valve assemblies at the furnace
- belt tensions on all pumps

C. Control Cabinet
   a. Remove any dust and or dirt from the control cabinets
   b. Inspect the secondary power cables for wear and heat deterioration

D. Water and pneumatic lines
   a. Examine individual water lines to ensure there is no blockage or sediment build up in circuits, concentrating on smaller hoses (VRT, power feed through, diffusion p/p, convection motor water lines)
   b. Inspect pneumatic lines for leaks
   c. Verify the regulator/ lubricator/ filter near the pneumatic bank is working properly

E. Voltage and Amperage
   a. Obtain voltage and amperage readings of the diffusion pumps heater feeds
   b. Take voltage and amperage readings of the gas blower at operating pressure to make sure amperage draw is not above motor rating
   c. Take voltage output readings of the Power Control Unit manual for further information as feed from the programmer at different output percentage. Adjust if necessary. Refer to the PCU manufacturers

F. Valves and Pressure Switches
   a. Test all pressure switches for proper operation. Adjust if necessary
   b. Lubricate any valves that have grease or oil cup by filling the cup with grease/oil from the pump it is sealing and turning it over until grease/oil comes out on the other side of the block
c. Utilize diffusion pump oil to lubricate the pump shaft seal however, older diffusion pumps may require grease for lubrication

d. Utilize booster pump oil to lubricate booster pump shaft seal

e. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost

f. Perform general cleaning of machine

**Other Conditions:**

1. The Preventive maintenance shall be conducted only during office hours, Monday – Friday.

2. Services shall be on a quarterly basis. The Government Arsenal, however, reserves the right to request services/s other than the quarterly services when the need arises, especially when problems occur necessitating further maintenance check-ups without extra cost upon receipt of formal notices of claimed machine defects, malfunctions or misbehaviour.

3. Maintenance services rendered after the one (1) year contract period should have a warranty obligation of three (3) months, in any case of recurrence of same problem within the warranty period is considered BACK JOB and rework should be done free of charge.

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*Signature Over Printed Name of Bidder*
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<tr>
<th>ITEM NO.</th>
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<th>TOTAL ABC, PhP</th>
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<tbody>
<tr>
<td>Preventive Maintenance of Fabrication Equipment</td>
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</tbody>
</table>
| 1. EDM Die Sink  
  a. Oscar Max  
  b. Maxsee  
  c. Roboform | 1 | lot | 690,000.00 |
| 2. EDM Wire Cut (AGIE Charmiles) Cut 20P | 1 | unit | 260,000.00 |
| 3. EDM Drill, Ocean-OCT3525ZA | 1 | unit | 150,000.00 |
| 4. CNC Milling Machine (Finetech SMV 610 H3L) | 1 | unit | 200,000.00 |
| 5. Vacuum Furnace (TAV TPF – 30/30/45 HP) | 1 | unit | 400,000.00 |
| **TOTAL** | | | | 1,700,000.00 |

Signature Over Printed Name of Bidder

Revised Bid