

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF NATIONAL DEFENSE
GOVERNMENT ARSENAL
Camp General Antonio Luna
Lima, Bataan

JOB ORDER NO. 03-2020

Date: 15 JUL 2020

TECHLINE, INC.

100 North Science Avenue
Laguna Technopark
Biñan, Laguna

Sir:

PLEASE FURNISH OR CAUSE TO BE FURNISHED the **Preventive Maintenance of One (1) Lot Fabrication Equipment** for the Account and Official use of the Government Arsenal:

1. **EDM Die Sink (Oscar Max, Maxsee and Roboform) – 3 units**

PhP491,625.00

Scope of Work:

- a. Perform detailed maintenance program as per machine manufacturer and provide preventive maintenance checklist during project implementation
- b. Checking of the following:
 - machine level and Axis Reference positions
 - lubrication levels
 - lube tank and air lubricators
 - oil filter element
 - oil temperature
 - cooling fans running and clean its cabinet
 - axis drives and I/O
 - C-axis system
 - clamp and unclamp and orientation
 - axis and spindle drive
 - check in front and behind LCD
 - motor fans
- c. Performs x, y and z axis alignment and calibration
- d. Checking and cleaning of the following:
 - oil cooler filter and fins
 - condenser
 - fan fins
 - oil temperature display and proper operation
- e. Draining, cleaning of suction filter and wipe out lube unit suction and in line
- f. Inspection of the following:
 - ATC, shuttle in/out, tool holder, alignment, positioning and sensors
 - Electrical connections in cabinet, power supply voltage cables and shielding
 - Servo motors, battery voltage, incoming power, transformer taps set to incoming volts, servo motor to ground/ phase to phase and x, y, z and c-axis backlash of ball screws and covers for proper function
 - Hoses with crack and/ or oil leaks
 - In/out fan motor, electrical cabinet and AVR unit

- g. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost
- h. Perform general cleaning of machine

2. EDM Wire Cut (AGIE Charmiles, Chmer) - 2 units

PhP370,500.00

Scope of Work:

- a. Perform detailed maintenance program as per machine manufacturer and provide preventive maintenance checklist during project implementation
- b. Perform calibration and alignment of x, y and z- axis
- c. Conduct ocular inspection of visually accessible parts and components
- d. Inspection of way covers and mating slide way for proper operation and lubrication
- e. Checking of the following: all hoses, lubrication lines for cracking, oil filter on control box, oil filters and clean out residue at bottom of filter
- f. Perform functional test and check for potential defects
- g. List down replacement of potential defective parts
- h. Lubricate the components when necessary and applicable
- i. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost
- j. Perform general cleaning of machine

3. EDM Drill, Ocean-OCT3525ZA – 1 unit

PhP106,875.00

Scope of Work:

- a. Perform detailed maintenance program as per machine manufacturer and provide preventive maintenance checklist during project implementation
- b. Perform calibration and alignment of x, y and z-axis
- c. Conduct ocular inspection of visually accessible parts/ components
- d. Inspection of way covers and mating slide way for proper operation and lubrication
- e. Checking of the following:
 - all hoses and lubrication lines for cracking
 - oil filters and clean out residue at bottom of filter
- f. Perform functional test and check for potential defects
- g. List down replacement of potential defective parts
- h. Lubricate the components when necessary and applicable
- i. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost
- j. Perform general cleaning of machine to include electrical cabinets and machine parts

4. CNC Milling Machine – 1 unit

PhP156,750.00

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. Perform calibration and alignment of x, y and z-axis
- d. 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
- e. Loose but functional machine parts and electrical wiring be soldered and secured without additional cost
- f. Accuracy check and machine leveling
- g. Perform general cleaning of machine

5. Vacuum Furnace – 1 unit

PhP374,528.00

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 servicing other than the quarterly servicing during the contract period 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 one (1) year, in any case of recurrence of same problem within the warranty period is considered BACK JOB and rework should be done free of charge.

TOTAL COST of LABOR and MATERIALS PhP1,500,278.00

----- nothing follows -----


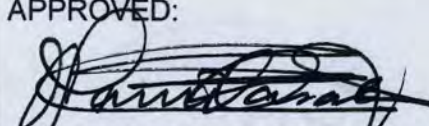
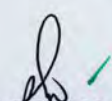
- ✓ **BASIS:** Fabrication Section, Engineering Division
- ✓ **REF:** PR No. 2019-09-248; APP 2020, Page I-II.A. (Repair and Maintenance of Equipment)
- ✓ **PROJECT SITE:** Camp General Antonio Luna, Lamao, Limay, Bataan
- ✓ **COMPLETION PERIOD:** Quarterly Visit within one (1) year from the receipt of Notice to Proceed (NTP)
- ✓ **PROJECT REFERENCE NO.:** GA-BAC-2020-IA-10
- ✓ **MODE OF PROCUREMENT:** Public Bidding
- ✓ **TERM OF PAYMENT:**

The terms of payment shall be as follows:

✓ Quarterly Payment shall be made thru Modified Disbursement Scheme (MDS) Checks or Direct Payment Scheme via bank debit system through issuance of Advice to Debit Account (ADA) of Supplier (DBM Circular 2013-16 dated December 23, 2013) after quarterly accomplishment and acceptance at the Government Arsenal subject to the submission of the following:

- ✓ Preventive maintenance report signed by C, Fabrication Section, Engineering Division; and
- ✓ Inspection and Acceptance Report duly signed by the Arsenal Acceptance Committee

✓ The remaining five percent (5%) shall be retained to cover warranty obligations, to be released three (3) months after total completion of the project or upon submission of an equivalent special bank guarantee.

<p>RECOMMENDED:</p> <p style="text-align: center;"></p> <p>MS. AVELINA C. ALIANGAN Superintendent Planning & Logistics Division</p> <hr/> <p>APPROVED:</p> <p style="text-align: center;"></p> <p>DANIEL R. CASABAR JR. Director</p>	<p>ALLOTMENT AVAILABLE</p> <p>RA _____ FUND _____ DOA No. _____</p> <p>FUNCTION _____ OBJECT CLASS _____</p> <p>OBLIGATION No. <u>02-10101-2020-07-0655</u></p> <p>AMOUNT <u>1,500,278.00</u></p> <p style="text-align: center;"></p> <p>MS. ALLECIAH D. CARREON, CPA Chief Accountant/Comptroller</p>
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Received and accepted **JOB ORDER** subject to terms and conditions

By: **MR. RONALD T. BERNARDO**
Printed Name and Signature

Date: 28 JUL 2020

THIS IS AN IMPORTANT PAPER AND WILL CAUSE DEALER INCONVENIENCE IF LOST