

#### **BID INVITATION**

#### 2-18-SS

Shelton State Community College will receive sealed bids in its Purchasing Office until **February 21, 2018 at 2:00 p.m.** for the items described in the bid invitation. Bids will be publicly opened and read aloud in the Business Services Conference Room, Room #1719.

#### **SUBMIT BID PROPOSAL TO:**

Bid Number 2-18-SS
Attention: DeLane Bailey
Shelton State Community College
9500 Old Greensboro Road
Tuscaloosa, AL 35405

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"No Bid" Responses Are Requested



#### **BID INVITATION**

1. "All bids shall be sealed when received" (Alabama Code § 41-16-54). Bids delivered by the vendor, United States Postal Service, Federal Express, UPS or other delivery service must have the bid number indicated on the envelope. It is the responsibility of the vendor to have the bid proposal delivered to the correct addressee and location.

Address bid to: DeLane Bailey, Associate Dean of Business Services
Shelton State Community College
9500 Old Greensboro Road
Tuscaloosa, AL 35405

- 2. Bids must be received prior to bid opening date and time. Late bids will not be considered.
- 3. All information shall be entered in ink, typewritten or computer generated in the appropriate space on the forms. An authorized company representative must sign bid in ink.
- 4. Prices submitted on the bid must remain effective for a period of thirty (30) days for complete bid evaluation.
- 5. Shelton State Community College reserves the right to reject any or all bids, or any part thereof, and to waive any technicality in the bidding in the best interest of the Institution. Bids will be awarded in a manner which appears to be in the best interest of Shelton State Community College. Awards may be issued to multiple bidders.
- 6. This proposal is to be made without connection to any other person, company, or parties making a bid or proposal and is to be in all respects fair and in good faith, without collusion or fraud.
- 7. Bid prices are not to include tax. Tax exemption certificate furnished upon request.
- 8. Quote F.O.B. delivered to sites listed in specifications. The successful bidder must assume all liability/responsibility for damage in transit.
- 9. The responsibility of determining the acceptability of any products offered rests solely with Shelton State Community College.
- 10. Successful bidder will be required to submit a copy of General Liability (umbrella) insurance. The copy must show amount limits for automobile, workmen's compensation, etc. (applicable for the delivery of materials, supplies, etc.)



#### **BID INVITATION**

- 11. Bidder shall, at its sole expense, procure and keep in effect all necessary permits and licenses required for its performance of the requested work or service.
- 12. Successful bidder must provide a copy of current state, county or city business license, general contractor's license or applicable license as required by law.
- 13. It is the responsibility of the bidder to inspect the facilities (grounds, road access, and buildings) for delivery method, installation and/or set-up of materials, supplies and/or equipment. Failure to inspect the facilities will not relieve the bidder of responsibility to provide for delivery F.O.B. or additional costs associated with delivery, installation and set-up as requested in the bid.
- 14. All bidders are required to complete a Disclosure Statement. Act 2001-955 requires the disclosure statement to be completed and filed with all proposals, bids, contracts, or grant proposals to the State of Alabama in excess of \$5,000. A Vendor Disclosure Statement is included in the bid proposal. Any changes to the status of the information on this form will require the submission of an updated form to Shelton State Community College.
- 15. Successful bidder will be required to complete the Alabama Immigration Law Compliance Documents. The Alabama Immigration Law Compliance Documents are included in the bid proposal. The successful bidder must comply with Alabama Act 2011-535 and agrees to submit a notarized Affidavit of Alabama Immigration Law Compliance as well as an E-Verify Memorandum of Understanding (E-Verify can be found at <a href="https://www.uscis.gov">www.uscis.gov</a>). By signing this contract, the contracting parties affirm, for the duration of this agreement, that they will not violate federal immigration law or knowingly employ, hire, for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of this agreement and shall be responsible for all damages resulting there from.
- 16. All bids must be notarized.
- 17. Bidders desiring further information or interpretation of plans or specifications must make requests in writing to DeLane Bailey, Associate Dean of Business Services, Shelton State Community College, 9500 Old Greensboro Road, Tuscaloosa, AL 35405, at least seven (7) days prior to bid opening. Questions can also be submitted via email at



#### **BID INVITATION**

<u>dbailey@sheltonstate.edu</u>. Answers to such requests will be given to all recorded bidders.

- 18. When brand name or catalog number is not stated by the bidder, it is understood the offer is exactly as specified. References in the specifications to name brands, catalogue numbers, etc., are for identification purposes only and in no way are intended to eliminate or discourage the offering of substitute items which equal the specifications.
- 19. Bid prices are to remain in effect from award date, February 21, 2018, through February 21, 2021.
- 20. The contract may be extended for a period of two additional years if no changes are made in the specifications and/or pricing by the vendor. Shelton State Community College and the vendor must agree in writing for the contract extension.
- 21. Shelton State Community College may cancel this agreement at any time with 30 days written notice.
- 22. Payment shall be contingent upon Shelton State Community College's inspection of and satisfaction with completed work or materials.
- 23. Any defective work or materials, non-conformance to bid specifications, damaged materials, or unsatisfactory installation shall be corrected to Shelton State Community College's satisfaction by the successful bidder at no additional charge. No payments on partial shipments will be made until all items have been received in good condition.
- 24. Notwithstanding any other provision in this Agreement, the parties acknowledge and agree that the terms and commitments contained herein shall not constitute a debt of the State of Alabama in violation of Section 213 of the Constitution of Alabama of 1901, as amended by Amendment No. 26.
- 25. It is further agreed that if any provision of this Agreement shall contravene any statute of Constitutional provision, either now in effect of which may be enacted during the term of this Agreement, then the conflicting provision of the Agreement shall be deemed null and void.



#### **BID INVITATION**

- 26. The bidder acknowledges, and agrees that its sole and exclusive remedy for any monetary claim or any claim for which Shelton State Community College has sovereign immunity that may arise from or relate to this Agreement is to file a claim with the Board of Adjustment of the State of Alabama. Any claim for equitable relief or for which Shelton State Community College does not have sovereign immunity shall be brought exclusively in the appropriate state or federal court which are situated in and/or covering Tuscaloosa County, Alabama.
- 27. This Agreement shall be governed by and construed in accordance with the laws of the State of Alabama without giving effect to any choice or conflict-of-law provisions or rules (whether of the State of Alabama or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than those of the State of Alabama.
- 28. These terms and conditions shall supersede any contrary language in any agreement entered into by the parties. All terms shall be reduced to writing and will not rely on any oral terms, nor shall any oral terms or agreement be incorporated herein.
- 29. As an entity of the State of Alabama, the parties recognize and agree that Shelton State Community College cannot and will not agree to indemnify any party to a contract resulting from this bid.
- 30. In accordance with the recommendations of the Governor and the Attorney General of the State of Alabama, the parties shall consider settling all disputes arising from or related to this agreement by using appropriate forms of non-binding alternative dispute resolution.
- 31. In the event of proration of the fund from which payment under which this agreement is to be made, the agreement will be subject to termination.
- 32. Shelton State Community College reserves the right to purchase according to availability of funds.
- 33. All applicable shipping and handling costs must be included in the pricing submitted with the bid.
- 34. Shelton State Community College will not accept prepay terms for the items and services in this bid.



#### **BID INVITATION**

- 35. Quantities listed on the specifications sheet are believed to be correct. However, Shelton State Community College reserves the right to alter or vary the quantities for a period of ninety (90) days from the bid opening.
- 36. This agreement constitutes the sole and entire agreement of the parties to this agreement with respect to the subject matter contained herein, and supersedes all prior and contemporaneous understandings, negotiations, and agreements, both oral and written, with respect to such subject matter.
- 37. By signing this contract, the contracting parties affirm, for the duration of this agreement, that they will not violate federal immigration law or knowingly employ, hire, for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of this agreement and shall be responsible for all damages resulting there from.
- 38. This agreement may be executed in counterparts, each of which shall be deemed and original, but all of which together shall be deemed to be one and the same agreement.
- 39. In compliance with Act 2016-312, the contractor hereby certifies that it is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.



#### **BID INVITATION**

#### NONRESIDENT BIDDER INFORMATION

41-16-57

- (b) The awarding authority in the purchase of or contract for personal property or contractual services shall give preference, provided there is no sacrifice or loss in price or quality, to commodities produced in Alabama or sold by Alabama persons, firms, or corporations. Notwithstanding the foregoing, no county official, county commission, school board, city council or city councilmen, or other public official, state board, or state agency charged with the letting of contracts or purchase of materials for the construction, modification, alteration, or repair of any publicly owned facility may specify the use of materials or systems by a sole source, unless:
- (1) The governmental body can document to the satisfaction of the State of Alabama Building Commission that the sole source product or service is of an indispensable nature, all other viable alternatives have been explored, and it has been determined that only this product or service will fulfill the function for which the product is needed. Frivolous features will not be considered.
- (2) The sole source specification has been recommended by the architect or engineer of record and who also documents that there is no other product available and that the use of the requirement is of an indispensable nature and why.
- (3) All information substantiating the use of a sole source specification is documented in writing and is filed into the project file.



## **BID INVITATION**

## **BID PROPOSAL FORM**

Proposal of
(Company Name)
of
(City and State)
Hereinafter, called "Bidder," a corporation, organized and existing under the laws of the State of, a partnership, or an individual doing business as:
TO: Shelton State Community College
9500 Old Greensboro Rd.
Tuscaloosa, AL 35405
Attn: DeLane Bailey
BID PRICE \$
FEDERAL IDENTIFICATION #



# BID INVITATION 2-18-SS BID CERTIFICATE

I hereby affirm I have not been in any agreement or collusion among bidders or prospective bidders in restraint of freedom of competition, by agreement to bid at a fixed price or to refrain from bidding, or otherwise.

	Firm or Compa	ny Name	
	Addres	SS	
	City, State and	Zip Code	
	Telephone Number	Fax Num	ber
	Email Add	ress	
	Name of Company R (Please Pr		
	Signature of Company	Representative	<u> </u>
	BID CERTIFICATE MUS	Γ BE NOTARIZEI	D
Sworn and subscr	ribed before me this the  20 Public	day of	PLACE NOTARY SEAL HERE
Date my c	ommission expires		



#### **BID INVITATION**



# State of Alabama Disclosure Statement

(Required by Act 2001-955)

(negative by ne	2001 777)
ENTITY COMPLETING FORM	
ADDRESS	
CITY, STATE, ZIP	TELEPHONE NUMBER
STATE AGENCY/DEPARTMENT THAT WILL RECEIVE GOODS, SERVICES, OR IS RESPONSIBLE FO	OR GRANT AWARD
ADDRESS	
CITY, STATE, ZIP	TELEPHONE NUMBER
This form is provided with:  Contract Proposal Request for Proposal	Invitation to Bid Grant Proposal
Have you or any of your partners, divisions, or any related business u Agency/Department in the current or last fiscal year?	nits previously performed work or provided goods to any State
Yes No If yes, identify below the State Agency/Department that received the go vided, and the amount received for the provision of such goods or servi	
STATE AGENCY/DEPARTMENT TYPE OF GOODS/SI	
	· ·
Have you or any of your partners, divisions, or any related business us Agency/Department in the current or last fiscal year?  Yes No If yes, identify the State Agency/Department that awarded the grant, the	
STATE AGENCY/DEPARTMENT DATE GRANT AWA	ARDED AMOUNT OF GRANT
List below the name(s) and address(es) of all public officials/public er any of your employees have a family relationship and who may direct Identify the State Department/Agency for which the public officials/pu	tly personally benefit financially from the proposed transaction.
NAME OF PUBLIC OFFICIAL/EMPLOYEE ADDRESS	STATE DEPARTMENT/AGENCY



State of Alabama in excess of \$5,000.

#### **BID INVITATION**

Notary's Signature	Date	Date Notary Expires
Signature	Date	
By signing below, I certify under oath an to the best of my knowledge. I further un to exceed \$10,000.00, is applied for knowledge.	nderstand that a civil penalty of ten perc	on or attached to this form are true and correct ent (10%) of the amount of the transaction, not Information.
NAME OF PAID CONSULTANT/LOBBYIST	ADDRESS	
List below the name(s) and address(es) of posal, invitation to bid, or grant proposal:	all paid consultants and/or lobbyists utilize	d to obtain the contract, proposal, request for pro-
Describe in detail below any indirect finance public official or public employee as the resadditional sheets if necessary.)	ial benefits to be gained by any public offic sult of the contract, proposal, request for p	ial, public employee, and/or family members of the roposal, invitation to bid, or grant proposal. (Attach
If you identified individuals in items one an officials, public employees, and/or their fan grant proposal. (Attach additional sheets if	mily members as the result of the contract,	e direct financial benefit to be gained by the public proposal, request for proposal, invitation to bid, or
NAME OF FAMILY MEMBER A	NAME O PUB	F PUBLIC OFFICIAL/ STATE DEPARTMENT/ LIC EMPLOYEE AGENCY WHERE EMPLOYED
immediate family, or any of your emplo	byees have a family relationship and who c officials/public employees and State Dep	public employees with whom you, members of you may directly personally benefit financially from the partment/Agency for which the public officials/public

Act 2001-955 requires the disclosure statement to be completed and filed with all proposals, bids, contracts, or grant proposals to the



#### **BID INVITATION**

## THIS VENDOR CERTIFICATION FORM HAS TO BE COMPLETED AND RETURNED IN ORDER TO MEET SPECIFICATIONS OF BID

## VENDOR CERTIFICATION BY ALABAMA DEPARTMENT OF REVENUE

#### **GENERAL INFORMATION:**

Shelton State Community College considers all vendors to be valuable assets in fulfilling its education, health, research, and service missions. As such, vendors should conduct their business openly, fairly, and honestly. All vendors are expected to fulfill their contractual commitments to the College in terms of cost, delivery, and quality of products and services. The College procurement contracts are a matter of public record, and they are based upon formal competitive bids or good faith negotiations between the College and the vendor. Failure to fulfill contractual commitments can jeopardize a company's status as an acceptable College vendor.

The following statement is applicable to all Requests for Formal Bid and Contracts for Professional Services that are required on all taxable sales and leases into Alabama:

#### Certification Pursuant To Act No. 2006-557

Alabama law (Section 41-4-116, Code of Alabama 1975) provides that every bid submitted and contract executed shall contain a certification that the vendor, contractor, and all of its affiliates that make sales for delivery into Alabama or leases for use in Alabama are registered, collecting, and remitting Alabama state and local sales, use, and/or lease tax on all taxable sales and leases into Alabama. By submitting this bid, the bidder is hereby certifying that they are in full compliance with Act No. 2006-557, they are not barred from bidding or entering into a contract pursuant to 41-4-116, and acknowledges that the awarding authority may declare the contract void if the certification is false.

COMPANY NAME		
SIGNATURE OF RESPONSIBLE PARTY		
PRINT: NAMF. TITLF	DATF	



#### **BID INVITATION**

The	following	statement	is	applicable	to	all	Requests	for	Formal	Bid	and	<b>Contracts</b>	for
Prof	essional Se	ervices:											

## **Certification Pursuant To Minority-Owned Business**

Alabama law (Section 25-10-3, Code of Alabama 1975) provides a definition of minority-owned businesses. Bidder from a business within the state that is a woman-owned enterprise, an enterprise of small business, as defined in Section 25-10-3, a minority-owned business enterprise, a veteran-owned business enterprise, or a disadvantaged-owned business enterprise shall acknowledge this status by signing this certification.

COMPANY NAME	
SIGNATURE OF RESPONSIBLE PARTY	
PRINT: NAME, TITLE	 DATE



## BID INVITATION AFFIDAVIT OF ALABAMA IMMIGRATION LAW COMPLIANCE

In compliance with SECTIONS 9 (a) and (b) BEASON-HAMMON ALABAMA TAXPAYER AND CITIZEN PROTECTION ACT (the "Act"); CODE OF ALABAMA, SECTIONS 31-13-9 (9a) and (b), this Affidavit of Alabama Immigration Law Compliance is to be completed and signed by an officer or owner of a contractor or grantee and notarized, as a condition for the award of any contract by Shelton State Community College to an employer that employs one or more employees in the State of Alabama and is a recipient of funds from Shelton State Community College. Contractors and Grantees are to provide notice to their Subcontractors of their Alabama Immigration Law Compliance obligations.

State of Alabama:
County of:
Before me, a notary public, personally appeared (print name) who, is duly authorized by the business entity/employer which appears below, being sworn, says as follows:  As a condition for being a contractor or grantee on a project paid for by contract, grant, or
incentive by the State of Alabama, or any political subdivision thereof, or any state-funded
entity, I hereby attest that in my capacity as
E-Verify Employment Eligibility Verification User Identification Number
Signature of Affiant Sworn to and subscribed before me this day of, 2
I certify that the affiant if known (or made known) to me to be the identical party he or she claims to be.
Signature and Seal of Notary Public

TO BE RETURNED TO SHELTON STATE COMMUNITY COLLEGE



#### **BID INVITATION**

#### **ATTACHMENT**

#### Please bid on the following Preventative Maintenance Agreement for:

- 2 Model CVHF Centrifugal Chiller
- 1 Model RTHB Rotary Chiller
- 3 Pumps, Evaporator Water Pumps
- 3 Pumps, Hot Water Pumps
- 1 Baltimore Air Cool, Cooling Tower
- 3 Pumps, Condenser Water
- 2 Lattner Electric Boilers

The bid will be for three (3) years. Payment will be on a monthly basis.

The maintenance work on Chillers shall be performed by **TRANE** factory certified Technicians. There will be three (3) operational inspections and one (1) annual inspection. Company will report arrival on Campus to the Central Plant. Company will be accompanied by Shelton Technician at all times. During the maintenance of equipment, the Service Employee is to provide individual assistance for questions and issues. The company is required to respond to any emergency within twelve hours.

#### **AIR CONDITIONING & REFRIGERATION EQUIPMENT**

- Scheduled Service Visits Company will provide service so that the Customer's listed equipment receives one (1) Annual Inspection and three (3) Operational Inspections per year. There will also be quarterly walk through inspections. Inspection services include, but are not limited to, those on attached schedule(s).
- 2. Annual Inspection Company will provide services so that the Customer's listed equipment receives one Annual Inspection. Annual Inspection tasks include, but are not limited to, those on the attached schedule(s). This inspection must be performed on date specified by owner.
- 3. Annual Inspection Materials Company will provide materials necessary to complete our Comprehensive Annual Inspection Services.
- 4. Operational Inspection Company will provide services so that the Customer's Listed equipment receives three (3) Operational Inspections. Operational Inspection tasks include, but are not limited to, those on the attached schedule(s).



#### **BID INVITATION**

- 5. Scheduled Service material Company will provide materials necessary to complete our Operational Inspection Services.
- 6. Company will transfer refrigerant from the Centrifugal and/or Screw Chiller into storage tanks as needed for repairs and transfer the refrigerant from the storage tanks back to the chiller(s) when repairs are completed.
- 7. Diagnostic Services Company will provide diagnostic services according to the indicated schedule(s). Report must be submitted to owner on completion.

#### Year 2018

- 1- Vibration analysis test per chiller
- 1- Spectrochemical oil analysis test per chiller
- 1- Eddy Current analysis of evaporator and condenser per chiller

#### Year 2019

- 1- Brush out condenser tubes on all tree chillers
- 1- Spectrochemical oil analysis test per chiller
- 1- Vibration analysis test per chiller

#### Year 2020

- 1- Brush out condenser tubes on all three chillers and perform Eddy Current test
- 1- Spectrochemical oil analysis test per chiller
- 1- Vibration analysis test per chiller
- 8. Tube Cleaning Services Company will mechanically brush condenser tubes once (only one chiller can be taken out of service at a time). The chiller evaporator barrel of each chiller is to be inspected and cleaned.
- 9. Company will clean cooling tower. Must be performed on date specified by owner.



#### **BID INVITATION**

#### ANNUAL INSPECTION CENTRIFUGAL CHILLER

#### System

Run and record a complete test log on the equipment Report unusual noises, vibrations, odors, etc.

Verify Capacity control reaction

Verify operation of vane linkage

Verify operation of flow switch

Record refrigerant level as seen in sight glass

Test complete interlocking circuit where possible

Run full load test if operating conditions permit

Check for leaks (high side) during operation

#### **Motor and Starter**

Open starter cabinet; check starter contacts for sign of overheating, arcing, burns, discoloration, etc.

Clean and inspect motor ventilation ports

Lubricate bearings when needed

Inspect oil pump starter enclosure for cleanliness, moister, and signs of oil

Inspect the starter for overheating, arcing, burns, etc.

Vibration analysis test on motor, compressor and drive bearings

Megg test motor

## Condenser

Remove end caps Mechanically brush tubes

#### **Lube System**

Draw oil sample for analysis
Measure and record motor amperage
Verify operation of the oil heater and oil cooler
Record oil level as seen in sight glass
Change oil filter



#### **BID INVITATION**

## **Purge Unit**

Record elapsed run times and start counts
Verify operation of purge compressor
Measure and record compressor amperage
Measure and record compressor and separator oil levels
Check all sight glass levels
Measure and record volume of water drained from unit
Verify operation of purge heaters
Megg test motor

#### Vessel

Pressurize vessel (high side and low side) by running water pumps Leak test machine as needed Mark leaks located Review findings with Customer



#### **BID INVITATION**

#### **OPERATIONAL INSPECTION CENTRIFUGAL CHILLERS**

#### System

Run and record a complete test log on the equipment

Report unusual noises, vibrations, odors

Verify capacity control reaction

Verify operation of vane linkage

Verify operation of flow switch

Record refrigerant level as seen in sight glass

Test complete interlocking circuit where possible

Run full load test if operating conditions permit

Check for leaks (high side) during operation

#### **Motor and Starter**

Open starter cabinet; check starter contacts for signs of overheating, arcing, burns, discoloration, etc.

Clean and inspect motor ventilation ports

Lubricate bearings when needed

## **Lube System**

Inspect oil pump starter enclosure for cleanliness, moisture, and signs of oil Inspect the starter for overheating, arcing, burns, etc.

Measure and record motor amperage

Verify operation of the oil heater and oil cooler

Record oil level as seen in sight glass

## **Purge Unit**

Record elapsed run times and start counts

Verify operation of purge compressor

Measure and record compressor amperage

Measure and record compressor and separator oil levels

Check all sight glass levels

Measure and record volume of water drained from unit

Verify operation of purge heaters

#### Vessel

Pressurize vessel (high side and low side) by running water pumps

Leak test machine as needed

Mark leaks located

**Review Findings with Customer** 



#### **BID INVITATION**

## ANNUAL INSPECTION RTHA/RTHB CHILLER

#### System

Run and record a complete test log on the equipment Report unusual noises, vibrations, orders, etc.

Verify capacity control reaction

Verify operation of flow switch

Record refrigerant level as seen in sight glass

Test complete interlocking circuit where possible

Run full load test if operating conditions permit

Check for leaks

#### **Motor and Starter**

Open starter cabinet; check starter contacts for signs of overheating, arcing, burns, discoloration, etc.

Clean and inspect motor ventilation ports

Lubricate bearings when needed

Inspect the starter for overheating, arcing, burns, etc.

Measure and record motor amperage

Vibration analysis on test motor, compressor and drive bearings

Megg test motor

#### Condenser

Remove end caps Mechanically brush tubes

#### **Lube System**

Draw oil sample for analysis Inspect oil pump starter enclosure for cleanliness, moisture, and signs of oil Verify operation of the oil heater and oil cooler Record oil level as seen in sight glass Change oil filter

#### Vessel

Leak test machine Mark leaks located Review findings with Customer



#### **BID INVITATION**

## **OPERATIONAL INSPECTION RTHA/RTHB CHILLER**

#### System

Run and record a complete test log on the equipment Report unusual noises, vibrations, odors, etc.

Verify capacity control reaction

Verify Operation of vane linkage

Verify operation of flow switch

Record refrigerant level as seen in sight glass

Test complete interlocking circuit where possible

Run full load test if operating conditions permit

Check for leaks

#### **Motor and Starter**

Open starter cabinet; check starter contacts for signs of overheating, arcing, burns, discoloration, etc.

Clean and inspect motor ventilation ports
Lubricate bearings when needed
Inspect the starter for overheating, arcing, burns, etc.
Measure and record motor amperage

#### **Lube System**

Inspect oil pump starter enclosure for cleanliness, moisture, and signs of oil Verify operation of the oil heater and oil cooler Record oil level as seen in sight glass

#### Vessel

Leak test machine as needed Mark leaks located Review findings with Customer



#### **BID INVITATION**

## **OPERATIONAL INSPECTION COOLING TOWER**

Record and report abnormal conditions
Review customer logs with customer for operational problems
Inspect and check freeze protection system
Inspect all structural elements for corrosion and damage
Inspect for scale buildup on eliminators
Adjust float assembly, if necessary
Clean sump and condenser strainers
Inspect spray orifice/nozzles
Inspect system for leaks in piping, flange connections, etc.
Verify operation of dump valve and drain
Verify operation of heaters

#### **Controls**

Verify that overflow drain is clear Verify operation of bleed system Verify operation of water feed and controls

#### Starter

Inspect wiring for secureness and damage and record condition

Measure operating amperage and record

Inspect contacts for signs of wear, arcing, overheating, etc., and record condition

#### Cooling Tower Fan Motor(s)

Inspect for unusual noises in bearings, motors, etc.

## Fan(s) (Axial/Propeller Only)

Inspect pulley grooves and belts for alignment, wear, and tension Lubricate couplings and bearings Inspect fan blade locking devices for secureness Measure gear box oil level Report condition of cooling tower and any repair requirements



#### **BID INVITATION**

## **BOILER OPERATONAL VISIT**

Inspect/replace connections for tightness and corrosion Inspect mountings for security Inspect for vibration and noise Inspect for leaks Check operation Inspect wire Check hi/low operation Test flow switch operation

## BOILERS, HOT WATER OR STEAM-CONTROLL PANEL ANNUAL VISIT

Inspect structural elements for corrosion and damage
Inspect mounting points for secureness, tighten if necessary
Inspect secureness of guards, doors and panel
Inspect for system leaks in piping, flange connections, etc.
Inspect boiler exterior, overall condition
Verify makeup water system
Test low water cutoff
Test emergency disconnect boiler shutdown
Check gauge glass on boiler and/or expansion tank
Inspect cabinet for cleanliness, moisture, oil, etc.
Inspect/replace connections for tightness and corrosion
Verify operation of indication devices
Check for obvious errors of installed pressure and temp gauges
Verify pressure or temperature, primary and backup controls
Inspect all contactors and electrical connections



#### **BID INVITATION**

## **OPERATIONAL PUMP INSPECTION**

Record and report abnormal conditions and measurements taken
Inspect for vibrations, unusual noises, odors, etc.
Inspect for vibration noise transmitted into piping
Inspect packing; adjust to a slow drip if necessary
Inspect mechanical seal
Verify flow in sealing/flushing line
Lubricate motor bearings
Inspect system for leaks in piping, flange connections, etc., and record condition
Lubricate pump bearings
Inspect motor windings for dirt buildup
Clean ventilation openings, (grills and/or screens)
Visually inspect coupling

#### **Starter or Contactor**

Inspect contacts for signs of wear, arcing, overheating, etc., and record condition Measure operating amperage and record readings

## **Operational Test**

Inspect level in system expansion tank and record reading Record suction and discharge pressures Report pump condition and repair requirements (if any)



#### **BID INVITATION**

## SPECTROCHEMICAL OIL ANALYSIS

#### **Sampling Procedure**

Run Machine to circulate oil in sump

Oil should be warm, not hot, from operation to obtain a representative sample

Sample will be taken at a petcock install on the oil line before the filter

Provide an appropriate and clean container for the sample

Provide a label indicating; machine manufacturer, model, oil type, run hours, and time elapsed since last sampling

#### **Analysis and Report**

Provide laboratory analysis to identify twenty metallic elements which are measured by a direct reading spectrometer

Identify water content which will be reported in ppm, detectable to less than 1 ppm

Measure the viscosity of the samples to 40 degrees C and report in centi strokes

Measure total acid number and report

Provide a written report of all conditions and contents, to include:

Unit/oil condition (normal, abnormal, critical)

Suitability of oil for continued use

Recommendations for corrective action (if required)

Answers to specific questions submitted with the sample

## **EVAPORATOR AND CONDENSER TUBE CLEANING**

Valve off machine and drain equipment

Remove condenser heads

Check division plate gasket

Check corrosion inhibitor anodes

Inspect Condenser heads, tubes, and crown sheets for corrosion, scale, and debris

Report condition of condenser heads

Report condition of crown sheets

Mechanically clean tubes

Replace division plate gaskets

Replace condenser had gaskets

Check division plate gasket fit-up

Reinstall condenser heads



#### **BID INVITATION**

## **COOLING TOWER CLEANING SERVICES**

Record and report abnormal conditions, measurements taken, etc.
Review customer logs with customer for operational problems and trends
Inspect and check freeze protection system
Valve off tower and drain
Inspect all structural elements for corrosion and damage
Inspect system for leaks in piping, flange connections, etc.
Test drain system
Remove all debris
Flush and clean hot water basin
Flush fill

## Additional tasks and/or special instructions

Flush and clean cold water sump
Clean float assembly, if necessary
Clean strainer
Fill system
Run system to inspect spray nozzles
Shut down system, clean nozzles as needed
Report condition of cooling tower and any repair requirements



#### **BID INVITATION**

2-18-SS February 21, 2018

## **SUMMARY SHEET**

VENDOR	BID PRICE