BASIC APPLICATION FOR EQUIPMENT / AIR POLLUTION PERMIT OR CERTIFICATE OF OPERATION

FORM E001
03/2011

1. Name of Company ~~Coca-Cola Bottling Company, UNITED, inc.~~ United Packers of Chattanooga, LLC
(If corporation or LLC, name on file with Tennessee Secretary of State Corporate Records Division)

2. NAICS Code: 312111

3. Company Official to Contact: Zak Tindell

4. Phone No. 423-457-7950

5. Mailing Address: 4000 Amnicola Hwy (*Street or P.O. Box*) Chattanooga (*City*) TN (*State*) 37406 (*Zip Code*)

6. Physical Location
(If different from line 5) _____ (*Street*) _____ (*City*) _____ (*State*) _____ (*Zip Code*)

7. Application for:
☒ Installation Permit ☐ Initial Certificate of Operation ☐ Renewal Certificate of Operation

Previous Installation Permit or Certificate of Operation No.: 6017-10200602-01C

8. Type of equipment for which application is made:

☐ Process Equipment (Form E010 or Form E010A)	☐ Previously Submitted	☐ Attached
☒ Fuel Burning Equipment (Form E011)	☐ Previously Submitted	☐ Attached
☐ Incineration Equipment (Form E012)	☐ Previously Submitted	☐ Attached
☐ Minor Pollution Source (Form E014)	☐ Previously Submitted	☐ Attached

(Less than 1000 lbs/yr and less than 10 lbs/day total uncontrolled contaminant emissions)

The following forms are filed with this application:

9. Equipment Name:
Hurst Series 250W Boiler #2

10. If application is for a Certificate of Operation (Initial or Renewal), are there any changes since previous application in the equipment or operation which might:

A. Increase, decrease, or alter process materials, fuel, refuse type, etc.? ☐ Yes ☒ No

B. Increase, decrease, or alter emissions or emission points? ☒ Yes ☐ No

Received
MAR 17 2025
Chattanooga-Hamilton County Air Pollution Control Bureau

11. Process Weight, lb/hr, (Item 6 on Form E010), Incineration Rate, lb/hr, (Item 3C on Form E012), or Fuel Burning Rate, 1,000 Btu/hr, (Item 7C on Form E011): 50.4 × 106 Btu/hour for Hurst Series 250W Boiler #2

This is to certify that I am familiar with operations concerning this equipment and the information provided on this application is true and complete to the best of my knowledge:

Mail completed form to:
CHATTANOOGA-HAMILTON COUNTY
AIR POLLUTION CONTROL BUREAU
6125 Preservation Drive, Suite 140
Chattanooga, TN 37416-3638

This form must be completely filled out before it will be processed

Name

Factory Manager
Title

03/13/25
Date

PROPOSAL TO

COCA-COLA BOTTLING CO. UNITED

FOR

BOILER SUPPLY

CHATTANOOGA, TN

Furnish & Install (1) New 1,200HP Boiler.

Industrial Boiler & Mechanical Company, Inc.

IB&M PROPOSAL NUMBER: 231016-1-JS (REV C)

SUBMITTED BY:
JOHN SMITH
V.P. OF ENGINEERING

October 16, 2023

Industrial Boiler & Mechanical Company, Inc.

October 16, 2023

Coca-Cola Bottling Co. United
174 Refreshment Lane
Cleveland, TN 37311

Attn.: Mr. Justin Brenizer

Ref. Quote #231016-1-JS (REV C)

Subject: Furnish & Install (1) 1.200HP Boiler

We at Industrial Boiler and Mechanical Company, Inc. are pleased to offer to you the following proposal to furnish Isolate, disconnect and remove (1) 600BHP Cleaver Brooks boiler and to supply and install (1) new 1,200BHP IB&M-Hurst, Model 250-W, boiler assembly with an Industrial Combustion low NOx natural gas fired burner assembly to meet the required (30ppm NOx) for your existing plant located in Chattanooga, Tennessee as follows.

current Cleaver-Brooks Boiler #2 (25.106 MMBtu/hr)

A. NEW BOILER ROOM EQUIPMENT:

I: One (1) New 1,200BHP Fire Tube Steam Boiler Assembly:

We propose to furnish (1) one new Hurst Series 250W Model S250W-G-1200-150 Steam Packaged Firetube 2-Pass Steam Generator, 150 psig design pressure, having a nominal rated capacity of 1200 HP (41,400 lbs/hr of dry saturated steam from, and at, 212°F). Capable of firing Natural Gas, 460-3-60V electrical supply, at less than 1,000' Altitude.

Two (2) IB&M/Hurst 2-pass 1200hp fire tube packaged boiler assemblies.

Manufacturer:	Hurst Boiler Company
Model Series:	Series 250W
Model Number:	S250W-G-1200-150
Rating:	1200BHP
Design Pressure:	150 psig/steam
Design Type:	2-Pass Wet Back
Operating Pressure:	135 psig or less
Capacity:	41,400 MBH - Output (From and at 212 degrees F.)
Codes:	ASME Section 1 & NFPA
Electrical:	460 Volts

The Following Trim Is Included with Boiler

• Stainless Steel Jacketing:	Included
• HI Water Probe:	Included (Warrick)
• Auto Low Fire Hold	Included
• Operating Pressure Limit Control:	Included
• High Pressure Limit Control:	Included
• Primary Level Control:	MM193-7B
• Secondary Level Control (LWCO):	Warrick Probe w/Manual Reset
• Modulating Feedwater Control:	Electric feedwater valve w/ 3-valve by-pass
• Safety Relief Valve(s):	Set at 150PSIG.
• Steam Pressure/Temp Gauge:	0-300PSI
• Water Gauge Assembly"	Included
• Water Gauge Drain Valve:	1" Included
• Feed Water Valving Stop & Check:	2-1/2" (1) Stop & (1) Check
• Everlasting Blowdown Valving:	2" (2)Quick (1)Slow Open Blowdown Valve
• Surface Blowdown Control Valve:	Skimmer Tube & Metering Valve Included
• Blowdown Conductivity Control:	Included
• Flue gas Stack Temperature Gauge:	1000DegF. - 5"
• Burner Combustion Block:	Included
• ALWCO : Push Button	Included – Located on Junction Box Door
• Burner Mounting:	Included
• Burner Control Wiring:	Included
• Burner Testing:	Included (dry fire testing)
• Mount Burner Gas Train:	Included
• Mount Burner O2 Trin:	Included
• Mount Burner Control Panel:	Included (mounted on side of boiler)

II: One (1) New 1200BHP Natural Gas Fired IC Low NOX Buner Assemblies:

One (1) New Industrial Combustion 1200hp natural gas fired packaged burner assemblies.

Manufacturer:	IC - Industrial Combustion
Model:	IC-LNS1G-504 480/3/60-CFG-BNR
Input Rate:	50,400 MBTU/Hr
Altitude:	< 1000 feet ABSL
NOx Rating:	<30PPM
Power Voltage:	480 V / 3 Phase / 60
Control Voltage:	120/1/60
Code:	UL 508A on Electrical Panels only
Insurance Requirements	NFPA-85, GE GAP, XL GAP
NEMA Rating:	Burner Panel NEMA 1; Remote Panel NEMA 12
Fuel:	Natural Gas
Nat Gas Supply Press:	5-PSIG
Firing Rate:	Modulating
Panel:	Burner Mounted NEMA 1
Alarm:	Included with silencing switch

- **Industrial Combustion SBRG series, Model: LNS1G-504 Size 1:**
  Firing Natural Gas at 50400 MBtu/h maximum
  30 ppm NOx emission level on gas
  Line voltage: 480/3/60, Control voltage: 120/1/60
  Loads: 100 HP Blower Motor
  Operation: Full Modulation with Open Damper Pre-Purge
  Modulation control: Multiple Actuators, Parallel Positioning
  Flame Safeguard Control: Fireye PPC6000 w/YB110 (Details Below)

- **Application Information:**
  Hurst 250W New OEM Boiler to be fired with a Industrial Combustion burner on the United States market.
  Scotch Firetube, 1200 HP design, operating at 110 PSI High Pressure Steam.
  Indoor - Typical Boiler Room, at 1000 Ft ASL elevation.
  UL 508A on Electrical Panels only Application, with NFPA-85, GE GAP, XL GAP insurance requirements.
  Fired at 50400 MBtu/h input, with no combustion air component oversizing required.
  Furnace dimensions are: 206" Long / 56" Dia..
  Furnace pressure of 4.7"WC is calculated (3.6"WC entered + 1.1"WC excess air/low NOx adjustment.)

- **Housing Assembly:**
  Standard, Scroll Down blower housing orientation. Standard, combustion air Inlet on Right orientation. Standard, Right Top Inlet FGR inlet orientation.
  Standard, Left hand swing for blast tube access. Standard, blast tube length. Standard, Right Hand gas inlet orientation.

- **Ignition System:**
  Natural Gas Electric Pilot ignition, with a 6000V Secondary gas ignition transformer.

- **Control Package:**
  Package #05172, Fireye PPC6000 and YB110UV Control System In Lieu of Standard, UV1A6 UV Scanner Flame Detection,
  BLL510 LCD Flame Safeguard Display, Mounted on Control w/NEMA 1 Window in Panel Door,
  NXTSD104, 10.4" color Touch Screen Human Machine Interface, Surface Mounted on Panel Door, (YB110_UV)
  NOTE: The selected FSG control complies with applicable UL rules and utilizes UL certified components where applicable.
  The burner product/FSG control combination is not UL listed.

- **Mode of Operation (Modulation):**
  Full Modulation - Parallel Positioning:
  The burner will cycle through a Open Damper Pre-Purge before ignition is initiated.
  Full modulation is achieved from multiple Fireye air and fuel metering actuators as follows:
  for combustion air damper control,
  NXC20 actuator with 15 Ft-Lb torque for FGR metering valve control,

NXC04 actuator with 3 Ft-Lb torque for primary gas metering control,
NXC04 actuator with 3 Ft-Lb torque for stabilizer gas metering control,

- **Limit and Operating Controls:**
  Low water cutoff, By Others (Generic symbol shown on wiring)
  High limit cutoff, By Others (Generic symbol shown on wiring).
  Operating Control By Others (Generic symbol shown on wiring)

- **VSD Blower Control:**
  Provide Fireye NXCESVFD expansion board for closed loop wiring of a variable speed drive on the combustion air blower.

- **Electrical Motors:**
  TEFC High Efficiency w/grounded shaft type Combustion Air Motor. Standard ODP High Efficiency type for all other Motors.

- **Blower Motor Starter or Drive:**
  ABB ACS550 for Variable Speed Drive on combustion air blower motor in lieu of thermal overload contactor.
  No Bypass Circuitry and do not include a Line Reactor.
  All Variable Speed Drive items to be mounted in High Voltage Panel.

- **Remote Emergency Shutoff:**
  Provide Terminals Only.

- **Line Voltage Transformers:**
  0.5 KVA Control Circuit Transformer, 480/3/60 Primary, 120/1/60 Secondary

- **Electrical Control Panel Configuration:**
  Selected configuration is for Burner Mounted Junction Box with Remote Mounted Panel Combining High Voltage and Controls.
  Panel #1: NEMA 1 Side Mounted Burner Terminal Junction Box, with Standard Latch.
  Panel #2: NEMA 12 Vertical Internal Rear Mounted Remote Panel Combining High Voltage and Control Components, with Standard Latch.
  Additional panel options:
  Additional components and precautions to isolate high voltage from control signals. Cooling Fan and Air Inlet Filter for Soft Starter or VSD panel #2 cooling.

- **Electrical Conduit:**
  Flexible Metal Electrical Conduit (Std.).

- **Wiring Options:**
  Color Coded Wiring based on UL508A (Std.).

- **Indicator Lights:**
  Standard Four Light Package - Power On (white), Main Fuel (green), Ignition (amber), Flame Failure (red)
  Utilizing 7/8" Dia. L.E.D. NEMA 4X lights and Engraved Lamacoid Placards.

- **Pilot Gas Train:**
  Standard, 1/2NPT Maxitrol 325-3, 10 Psi Inlet, 15-30" Spring gas pilot regulator with a Standard Ball Valve manual shutoff and Two Pilot Solenoid Valves (required by code). Include the following optional items:
  N.O. Solenoid Gas Pilot Vent Valve (required by code)

- **Main Gas Train:**
  The selected gas train is in lieu of the burners standard gas train configuration.
  Selection is for a Integrated regulation - Dual Motorized valve body with integrated regulation gas train.
  Sizing based on - Gas train inlet pressure of 5 Psi. - Gas manifold pressure of 50.1 in.w.c. - Burner 50400 MBtu/hr max. firing rate. - 4.7 in.w.c. Furnace Pressure
  The inlet pressure is classified as low. To adjust, oversized gas valves will be utilized in the burners construction.
  The gas train is to have a NEMA 1 electrical rating and the components will be Shipped Loose (standard).
  Gas train components as follows:
  4"NPT upstream manual Ball Valve, (Gas regulation is integrated within the primary gas valve),
  4"NPT dual motorized valve body, Siemens VG Series Motorized with PoC secondary, Siemens VG Series Motorized with Regulation and PoC primary,
  4"NPT downstream manual Ball Valve, 4"NPT Reduced Port butterfly valve.

- **Main Gas Train Accessories:**
  High and Low gas pressure switches are required (shipped loose).
  2"NPT Normally open vent valve is required (shipped loose).
  Include Leak Test Cocks and Manual Valve for Vent (shipped loose).

- **Refractory/Dry Oven:**
  Standard Dry Oven.

III: Two (2) New 1200BHP Feedwater Pump Assemblies:

We propose to furnish (2) two new Grundfos Model CR 32-5 K-G-A-E-HQQE Feedwater supply pump assemblies, as noted below:

Two (2) IB&M/Hurst 2-pass 1200hp fire tube packaged boiler assemblies.

Manufacturer:	Grundfos
Model Series:	CR 32-5 K-G-A-E-HQQE
Style:	Vertical Multistage Centrifugal
Liquid temperature range:	-22 to 248 °F
Selected liquid temperature:	227 °F
Actual calculated flow:	165 US GPM
Resulting head of the pump:	357.5 ft
Rated power - P2:	25 HP
Pump speed on which pump data are based:	3497 rpm
IE Efficiency class:	NEMA Premium

B. EXISTING BOILER EQUIPMENT REMOVAL:

I: Existing (1) One 600BHP Boiler Removal:

We at Industrial Boiler and Mechanical Company, Inc. propose to furnish all necessary cranes, rigging, materials, equipment, and labor to isolate, disconnect and remove one existing 600BHP Cleaver Brooks firetube boiler assembly necessary to facilitate the installation of (1) new 1200BHP Hurst firetube boiler, as follows.

1. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out the customer disconnected power wiring and conduit to the existing boiler as necessary to facilitate the removal of the existing firetube boiler.
2. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing control wiring and conduit to the existing boiler assembly as necessary to facilitate the removal of the existing firetube boiler.
3. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing natural gas supply pipeline as necessary to facilitate the removal of the existing firetube boiler.
4. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing main steam pipeline as necessary to facilitate the removal of the existing firetube boiler.
5. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing feedwater pipeline from the existing boiler feedwater pump assemblies located under the existing deaerator assembly as necessary to facilitate the removal of the existing firetube boiler.
6. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing bottom blowdown pipeline as necessary to facilitate the removal of the existing firetube boiler.
7. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing continuous blowdown pipeline as necessary to facilitate the removal of the existing firetube boiler.
8. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing controls drain pipelines as necessary to facilitate the removal of the existing firetube boiler.
9. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing safety relief valves and vent piping as necessary to facilitate the removal of the existing firetube boiler.
10. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing boiler vent piping necessary to facilitate the removal of the existing firetube boiler.
11. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing natural gas train vent piping as necessary to facilitate the removal of the existing firetube boiler.
12. Provide the necessary materials, equipment, labor, and supervision to disconnect and remove the existing flue gas stack breeching assembly as necessary to facilitate the removal of the existing firetube boiler.
13. Provide the necessary jacks, rigging, materials, equipment, labor, and supervision to lift, rig and remove the existing firetube boiler assembly from the boiler room. (Note: We at IB&M will provide the necessary cranes, rigging, trucking as necessary to

remove the old removed firetube boiler from the plant and properly dispose at no additional cost to customer, for the scrap value)

II: Existing (2) Two 600BHP Feedwater Pump Assembly Removal:

We at Industrial Boiler and Mechanical Company, Inc. propose to furnish all necessary rigging, materials, equipment, and labor to isolate, disconnect and remove the two existing 600BHP feedwater pump assemblies located under the existing deaerator assembly, as necessary to facilitate the installation of (1) new 1200BHP Hurst firetube boiler, as follows.

1. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out the customer disconnected power wiring and conduit to the existing feedwater pump assemblies, as necessary to facilitate the removal of the existing feedwater pumps.
2. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing control wiring and conduit to the existing feedwater pump assemblies, as necessary to facilitate the removal of the existing feedwater pumps.
3. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing suction feedwater pipeline from the existing boiler feedwater pump assemblies located under the existing deaerator assembly as necessary to facilitate the removal of the existing feedwater pumps.
4. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing discharge feedwater pipeline from the existing boiler feedwater pump assemblies located under the existing deaerator assembly as necessary to facilitate the removal of the existing feedwater pumps.
5. Provide the necessary materials, equipment, labor, and supervision to lock-out and tag-out, isolate and disconnect the existing feedwater by-pass pipeline from the existing boiler feedwater pump assemblies located under the existing deaerator assembly as necessary to facilitate the removal of the existing feedwater pumps.

C. EXISTING BOILER EQUIPMENT INSTALLATION:

We at Industrial Boiler and Mechanical Company, Inc. propose to furnish all necessary cranes, rigging, equipment, tooling, materials, engineering, quality control, labor, and supervision necessary to receive, unload, set and install the above new boiler assembly and (2) new boiler feedwater pump assemblies in the customer's existing boiler room. The installation of the new boiler assembly and feedwater pump assemblies shall be installed in accordance with the requirements of the State of Tennessee, ASME and the NBIC. All welders shall be certified in accordance with the ASME as follows.

I: Two (2) New 1200BHP Feedwater Pump Assemblies:

We at Industrial Boiler and Mechanical Company, Inc. propose to furnish all necessary equipment, tooling, materials, engineering, quality control, labor, and supervision necessary to modify the existing deaerator storage tank assembly in accordance with the NBIC and ASME Codes to facilitate the installation of the (2) new feedwater pump assemblies, as follows.

1. Provide the necessary tooling, equipment, materials, and labor to mechanically remove the (2) two existing 2" feedwater pump suction nozzles in the customer's existing deaerator storage tanks assembly.

2. Provide the necessary tooling, equipment, materials, and labor to mechanically weld prep the existing deaerator storage tank assembly where the (2) two existing 2" feedwater pump suction nozzles were removed.
3. Provide the necessary tooling, equipment, materials, and labor to supply and install (2) two new 2-1/2" feedwater pump suction nozzles in the customer's existing deaerator storage tanks assembly.
4. Provide the necessary ASME & NBIC engineering, quality control, and authorized inspection services necessary to modify the existing deaerator storage tank where the install (2) two new 2-1/2" feedwater pump suction nozzles in the customer's existing deaerator storage tanks assembly.
5. Provide the necessary freight to deliver (2) new boiler feedwater pump assemblies to the customer's existing boiler room at the customer's facility.
6. Provide the necessary lifting equipment to receive, unload and set the (2) new boiler feedwater pump assemblies to the customer's existing boiler room at the customer's facility.
7. Provide the necessary materials, equipment, labor, supervision, set, mount and install the (2) two new feedwater pump assemblies on the existing deaerator support stand assembly.
8. Provide the necessary rigging, materials, equipment, and labor to supply and install a new feedwater suction pipeline from the new deaerator pump suction nozzles to the (2) two new feedwater assemblies. This includes the necessary new pipe, pipe fittings, manual shut-off valving, strainers, and pipe insulation with PVC jacketing.
9. Provide the necessary rigging, materials, equipment, and labor to supply and install a new feedwater discharge pipeline from the (2) two new feedwater assemblies to a by-pass piping assembly. This includes the necessary new pipe, pipe fittings, manual shut-off valving, check valving, and pipe insulation with PVC jacketing.
10. Provide the necessary rigging, materials, equipment, and labor to supply and install a new pump by-pass pipeline from the new feedwater pump assemblies to the existing deaerator pump by-pass nozzles. This includes the necessary new pipe, pipe fittings, manual shut-off valving, and by-pass orifices.

II: One (1) New 1200BHP Boiler Assembly:

We at Industrial Boiler and Mechanical Company, Inc. propose to furnish all necessary cranes, rigging, equipment, tooling, materials, engineering, quality control, labor, and supervision necessary to receive, unload, set and install the above new boiler assembly in the customer's existing boiler room, as follows.

1. Provide the necessary freight to deliver one (1) new 1200BHP boiler assembly to the customer's existing boiler room at the customer's facility.
2. Provide the necessary freight to deliver (1) new boiler access platform assembly to the customer's existing boiler room at the customer's facility.
3. Provide the necessary cranes, lifting equipment, labor, and supervision to receive, unload and set the one (1) new 1200BHP boiler assembly in the customer's existing boiler room at the customer's facility.
4. Provide the necessary materials, equipment, labor, supervision, cranes and rigging to shop fabricate and field install one new OSHA approved 3'x 5'boiler platform and ladder assembly and mount the new boiler assembly.
5. Provide the necessary cranes, rigging, lifting equipment, tools, materials, labor, and supervision to shop fabricate and field install a new 20' tall carbon steel single wall flue gas stack assembly. (Note, all roof penetrations and sealing by customer)
6. Provide the necessary materials, equipment, labor, and supervision to assemble the shipped loose trim for the new boiler assembly.
7. Provide the necessary tooling, equipment, materials, labor, supervision, and engineering to field modify the existing steam header assembly to replace the existing 6" flanged steam

header inlet nozzle with a new 8" steam valved inlet nozzle on the existing steam headed. To facilitate the installation of the new 1200BHP steam boiler.

8. Provide the necessary rigging, materials, equipment, and labor to supply and install a new 250/300# flanged non-return and stop gate valve with a ¾" free blow-off vent valve on the above new steam gate valve.
9. Provide the necessary rigging, materials, equipment, and labor to supply and install a new 8" main steam pipeline from the new boiler's main steam valved outlet connection to the new 8" flanged and valved steam header connection. This includes up to (60) feet of pipe, pipe fittings, supports, pipe insulation with PVC jacketing.
10. Provide the necessary rigging, materials, equipment, and labor to supply and install the necessary pipe and pipe fittings to install the new boiler relief valve(s) on the new boiler with the necessary drip pan elbow(s), vent and drain piping. This included the necessary drip pan elbow(s) and vent piping where necessary. (Note, all roof penetrations and sealing by customer)
11. Provide the necessary rigging, materials, equipment, and labor to supply and install the necessary vent pipe, pipe fittings and supports from the boiler's vent valving through the boiler room roof. (Note, all roof penetrations and sealing by customer)
12. Provide the necessary rigging, materials, equipment, and labor to supply and install the necessary vent pipe, pipe fittings and supports from the boilers' natural gas vent valving through the boiler room roof. (Note, all roof penetrations and sealing by customer)
13. Provide the necessary rigging, materials, equipment, and labor to supply and install a new feedwater pipeline from the new feedwater pumps to the new boiler feedwater inlet train. This includes up to (60) feet of new pipe, pipe fittings, manual valving, and pipe insulation with PVC jacketing.
14. Provide the necessary rigging, materials, equipment, and labor to supply and install a new bottom blowdown pipeline from the new boiler's blowdown outlet train to the existing blowdown separator. This includes up to (40) feet of new pipe and pipe fittings.
15. Provide the necessary rigging, materials, equipment, and labor to supply and install a new continuous blowdown pipeline from the new boiler's continuous blowdown valve to the new boiler's blowdown pipeline. This includes up to (20) feet of new pipe and pipe fittings.
16. Provide the necessary rigging, materials, equipment, and labor to install all drain piping from the pressure controls on the new boiler to the customers' existing floor drain.
17. Provide the necessary rigging, material, equipment, and labor to install a new natural gas pipeline from the plant's existing natural gas meter station located outside the existing boiler room to the new boiler's natural gas train inlet connection. This includes up to (120) feet of new pipe, pipe fittings and plug cock valving.
18. Provide the necessary rigging, materials, equipment, and labor to supply and install the new control wiring at boiler assembly. This included the necessary ridged & flex conduit, conduit fittings, wiring and supports.
19. Provide the necessary materials, equipment and labor to start-up and tune out the boiler assembly on natural gas. This included the necessary tooling and analyzers.
20. Provide the necessary equipment, tooling, and labor to clean up debris daily from the job site.
21. IB&M to provide State of Tennessee Boiler Installation Permits. Air permits by customer.

Our Boiler Supply & Install Price Is: . . . . . $ 936,210.00 Plus Tax
Estimated Chattanooga Tennessee Sales Tax at (9.75%): . . . . . .$ 91,280.00

- **Estimated delivery of the new boiler is 16-18 weeks after receipt of purchase order and down payment.**
- **Estimate of installation, approximately 10-12 days after receipt of new boiler.**

Payment Terms:

33% down with the award of contract.
33% upon delivery of pressure vessel materials at boiler factory.
34% upon release delivery of boiler.

Pricing: **The above pricing is firm for 30 days past the above proposal date.**

Notes:
1. All labor quoted on a straight time basis, working 2-shifts x (7) 12-hour days per week.
2. All electrical power wiring to new boiler & feedwater pumps by customer.
3. All building modifications, including foundations, roof, and wall openings and closing by customer.
4. No valving insulation included in the above bid.
5. No TDS or sample cooler is included in the above bid, to be provided by the customer's water treatment service provider.
6. Boil-out of new boiler to be provided by customers water treatment service provider.
7. Customer to provide a metal and debris dumpster.

Note: *The above boiler/burner package in our opinion is the best boiler/burner package available to fit the existing boiler room. This combination allows us to fit (2) 1200BHP boilers in your existing boiler room. The boiler is a Hurst Model 250W with incorporates the best available technology, utilizing XID (riffled) boiler tubes. These XID tubes allow the burner flue gases to spin down the tube eliminating laminar flow and giving less square footage of surface and better heat transfer with a smaller boiler footprint. The burner is an (IC) Industrial Combustion low (30ppm NOx) heavy industrial burner assembly (no sheet metal and plastic). The S1 series burners use a true forced-draft design to deliver rated capacities against a wide range of furnace pressures. Easy access for maintenance is granted through hinged rear doors and burner access panels. The FGR control valve ensures proper metering of FGR for maximum NOx reduction; and the FGR shutoff valve is standard, which prevents combustible gases from returning to the combustion zone. These are the burners we at IB&M use for our own rental boiler applications.*

We, at Industrial Boiler and Mechanical Company, Inc., would like to thank you for the opportunity to offer to you the preceding proposal. If we can be of any further assistance to you in any of your boiler or mechanical needs, please call us at (423) 629-1117.

Best Regards

John D. Smith
V.P. Of Engineering
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cc:
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