THE

BABCOCK & WILCOX CO.

NEW YORK



SPECIFICATION

STIRLING WATER-TUBE BOILERS

PROPOSAL OF

CHAS. C. MOORE & CO. ENGINEERS, Inc.

Main Office, SAN FRANCISCO, CAL., Sheldon Building, First St., Cor. Market

SEATTLE, WASH.

LOS ANGELES, CAL.

SALT LAKE CITY

TUCSON, ARIZONA 21 SOUTH STONE AVE. NEW YORK
HUDSON TERMNAL BLDG.

SEATTLE, WASH.,....

March 17.

192 3

CRAIG MOUNTAIN LUMBER COMPANY

[Hereinafter called the Purchaser]

WINCHESTER. IDAHO

CHAS. C. MOORE & CO. ENGINEERS (hereinafter called the Company) agree to sell to and install for the Purchaser, and the said Purchaser agrees to buy from the Company, the apparatus and material hereinafter described, and to pay for the installation thereof in accordance with the following specifications, terms and conditions, to-wit:

*DESCRIPTION.

The work contemplated under this proposal shall consist of furnishing and installing the following equipment:

- 1 Stirling Patent Safety Water Tube Boiler
- 1 Dutch Oven Furnace
- 1 Secondary air control
- Steel stack and breeching Necessary boiler brick work Erection Drawings and Engineering

The above work is further described in detail in the following specifications.

STIRLING BOILER

There will be furnished, delivered, and installed, on foundations to be furnished by you and ready for you to make steam feed and blow-off connections, one Stirling Boiler of 492 rated horse power, having a total of 4922 square feet of effective heating service. Boiler will be designed for operation on saw mill refuse, and will be constructed in accordance with the detail specifications of the Babcock & Wilcox

Company, No. S-2673, attached hereto and forming a part of this proposal.

Prop. No. S 26.74

Boiler will be designed for a working pressure of 160 lbs. per square inch, and constructed in accordance with the requirements of the code of the American Society of Mechanical Engineers.

DUTCH OVEN FURNACE

Boiler will be provided with necessary dutch oven furnace iron work for a furnace extending 10 feet beyond the line of boiler supports, and of suitable height for use with sprung semi-circular arches having arch crowns 4 feet above surface of grate at front end of furnace. Grates are to be furnished by the Purchaser and installed by the company. Grates will be 11 feet long, set with a drop of one foot in their length. Necessary tie rods and buck stays will be provided and installed. The proposition does not include any steel deck for furnace cover or to serve as fuel deck between boiler and front wall of building. Purchaser will furnish, and company will install, four special fire tile fuel hole liners.

SECONDARY AIR CONTROL

There will be furnished, delivered, and installed special air control dampers for insertion in boiler side wall at end of stub bridge wall, by means of which amount of secondary air admitted in rear of stub bridge wall, can be controlled. This air control will consist of double air damper and frame and horizontal division plate to be placed between the two portions of secondary air duct.

STEEL STACK AND BREECHING

There will be furnished, delivered, and installed one steel stack and breeching for direct mounting on damper box. Stack shaft will be 60 inches in diameter, and of such height that its top will be 140 feet above boiler room floor. Stack shaft will be constructed

square inch, and constructed in accordance with the requirements Boller will be designed for a working pressure of 160 lbs. per

of one-third each of 1/4". 3/16" and No. 8 steel plate properly riveted together and furnished with necessary guy bands, top band, and painter's trolley. Stack shaft will be mounted on one steel A-shaped breeching constructed of 5/16 steel plate. The bottom of breeching will be fitted to damper frame. Stack will be held in place by two sets of guy lines. Guy lines will be securely fastened to dead men by the company. These dead men will be installed by the purchaser.

STACK SCREEN

There will be furnished, delivered, and mounted on stack, one stack screen 12 feet in height, consisting of 6 vertical angles surrounded by 3 horizontal bands, to which will be firmly secured black iron screening made of 3/16 wire, 2 meshes to the inch. Top of stack screen will be open.

NECESSARY BOILER BRICK WORK

The company will furnish all necessary boiler brick work for the complete heat encasement of boiler and furnace above specified. Red brick shall be hard burned, of first quality, having no bulges or cracks of undue size. Every fourth course will be headers. Walls shall be true to line, and the whole will be a first class and workmanlike job in every respect. Firebrick shall be Idaho white brick and will be laid in fire clay mortar. Fire brick will be rubbed into place to make joints as thin as possible. This proposal includes brick work above boiler room floor line. It is contemplated that purchaser will install foundations to floor line. If floor line is depressed at front part of boiler and furnace, brick work opposite depressed portion will be carried from floor line in front of boiler.

All necessary special and standard fire tile for construction of baffles will be furnished and installed. Firebrick linings will be of standard thicknesses for furnace and boiler side walls. Center wall of dutch oven will be 18 inches thick and constructed of solid fire brick. Arches of dutch oven will be made of special shapes conforming to the curvature of the arch so that key brick will not require cutting in the field.

ERECT ION

The company will furnish all labor, materials, and supervision required for the complete installation of the apparatus as specified above. All work will be done in a first class manner under the direction of a competent superintendent thoroughly familiar with, and skilled in, the construction of boilers and their setting.

DRAWINGS AND ENGINEERING

The company will furnish all necessary foundation drawings for use by the purchaser in preparing proper seatings for boiler.

There will also be furnished two complete sets of drawings covering boiler and setting. Outline drawing will be furnished showing suggested arrangement of piping for inter-connecting proposed boiler with existing steam and feed lines.

ENG INEERING

Such engineering as may be necessary in connection with the installation shall be done by the company free of cost to the purchaser. This work will also include furnishing the purchaser necessary drawings to cover the changes necessary on purchaser's boilers No. 1 and 2 to make furnaces on same conform to the design of furnace proposed for boiler No. 3.

baffles will be furnished and installed. Firebrick linings will be of standard thicknesses for furnace and boiler side walls. Center

All necessary special and standard fire tile for construction of

FREIGHT RATES

The prices hereinafter named are based upon estimates prepared, using a freight rate of \$1.865 per hundred on boiler equipment from Barberton, Ohio, to Winchester, Idaho, and \$1.185 per hundred on stacks, breeching, and screen from Pacific Coast Terminal to Winchester, Idaho, with a minimum carload of 24,000 lbs.

It is understood and agreed between the company and the purchaser that should the freight rates to be paid by the company differ from those above specified, then due and proper allowance will be made for such increase or decrease in total freight included in this contract, and any difference so determined shall be applied at the time of making final payment on the contract. The purchaser shall afford the company right of way and complete access to point of erection, and shall have foundations for boiler installed ready to receive same prior to the arrival of the company's erection force.

PRICE

The company will furnish all the material and do all of the work to be performed as outlined above, for and in consideration of the sum of sixteen thousand nine hundred and fifty dollars (\$16,950) to be paid to the company by the purchaser in accordance with the terms of payment hereinafter set forth.

(ALTERNATIVE not accepted the S

In the event that the purchaser desires the company to furnish a class S No. 28 boiler of 551 horse power in lieu of the boiler above specified and described in specification No. S 2673, same will be furnished by the company in accordance with the following detailed differences from specification No. S 2673:

The prices hereinaiter named are cased upon estimates pre-

hi rate of \$1.865 per hundred on boiler equip-

KURTOHA RYARS

Effective boiler heating service 5513 sq. ft. Total number tubes 504 Feed valve and connection - 3 inch Two - $2\frac{1}{2}$ blow-off valves will be furnished. Steam drums will be 16 ft. 5-5/8 in. long. Mud drum will be 15 ft. 7-5/8 in. long. Boiler width will be 17 ft.

The company will furnish the 551 horse power boiler as above described, complete with stack, breeching, setting, et cetera, as above specified, for and in consideration of a payment to the company by the purchaser of the sum of seventeen thousand eight hundred and seventy five dollars (\$17,875), to be paid in accordance with the terms of payment hereinafter set forth.

EXTRA WORK

Should the purchaser desire, the company will undertake as an extra on this contract the furnishing and installation of all necessary feed and steam piping for the connection of boiler to existing lines, and will undertake to extend the furnaces on boilers No. 1 and 2, and the purchaser will pay for such extra work on the basis of cost to the company, plus 10%.

General Guarantee

Purchaser's Agreement

The Company agrees to correct any defects in the apparatus which develop under normal and proper use, within thirty days from the starting thereof, provided the Purchaser gives the Company immediate written notice of such defects, and provided further that during said period the apparatus shall not be taxed beyond its normal capacity, shall be regularly cleaned and cared for, and shall be operated normally and properly. The Company agrees that the installation shall be done in a thorough and workmanlike manner. The Company shall not be held responsible for work done, apparatus furnished, or repairs made by others. This agreement shall not be considered to include the furnishing of repair parts, replacement of parts worn or damaged by usage, or the replacement of parts which properly come within the maintenance cost of power plant operation, nor shall this agreement include a guarantee of condenser tubes against corrosion or pitting due to salt water.

The Purchaser agrees to properly care for all apparatus and material delivered until the same is fully paid for, and to hold the Company harmless against the payment of any taxes assessed against the apparatus and material after it shall have been shipped. The Purchaser agrees, without charge, to furnish for the Company, all necessary and safe storage, rights of way, permits and authority for installation and operation of the plant hereunder, and to reimburse the Company for any loss incurred by reason of delays in starting the plant and completing the work that are not chargable to the Company; to designate the location of the apparatus herein specified before the work is begun, and to pay extra for any changes made in location, after same has been placed, and for any work performed or apparatus or material furnished in addition to that herein specified; and, furthermore, that the apparatus, after the starting thereof, shall be operated by the Purchaser. The apparatus shall be considered as started when first put in operation. The Company shall not in any event be held responsible or liable for any loss, damage, detention, or delay caused by fire, strikes, lockouts, civil or military authority, or by insurrection or riot, action of the elements, forces of nature, or by any other cause beyond its control, nor in any event for consequential damages. Receipt of the apparatus by the Purchaser shall constitute a waiver of any claim for loss or damage due to delay.

Unless otherwise herein agreed, the Purchaser agrees without charge to the Company, to protect all the apparatus and material from the weather, to do all necessary grading, excavation work and back filling, to keep all excavations and building free from water during foundation and other work, and to prevent the surrounding earth from caving; to make all borings required; to test the sub-soil; to furnish all necessary and suitable machinery foundations, including templates, bolts and tubing for same, also grouting; or if foundation work is included in this proposal, and should the condition of the ground or floor level be such that the size or depth of foundation greater than standard or greater than specified herein is required, to furnish the additional foundation work; to provide all necessary and suitable sub-foundations due to unfavorable ground; to provide all necessary and suitable water required for concrete work, brickwork, hydrostatic tests and drinking purposes during installation of plant; to remove water after hydrostatic tests; to furnish the plant site, necessary and suitable buildings, building foundations, condenser pits, sumps, trenches, trench covers, flooring, stairways, platforms, railings, fuel oil storage tanks, fresh water storage tanks, ventilation; to do all carpenter work; to cut necessary holes in building walls; to provide openings for handling the machinery into the building; to cut special openings where necessary and to repair same, to do all work outside of building; to furnish necessary and suitable crane and crane operator for handling machinery; to furnish, deliver and install all electrical equipment and appurtenances; furnish necessary electrical power for the operation of tools and for the illumination of plant during installation, also lights, etc.; to do all necessary painting, to provide safe storage for tools, small parts, etc.; to provide temporary housing for machinery if required, in case of failure of the Purchaser to complete the building on time and as protection against the weather; to furnish the services of a night watchman; to afford the Company right-of-way at the plant site over all persons, including the Purchaser's sub-contractors; to refrain from interference with the agents, employes or servants of the Company or the Company's sub-contractors; or imposing any restrictions regarding character of labor, whether union or non-union, and the hours for labor; to insure

General Guarantee THE COMPANY AGREES TO CORRECT ANY DEFECTS IN THE APPARATUS WHICH DEVELOP UNDER NORMAL AND PROPER USE, WITHIN THERTY DAYS FROM THE STARTING THEREOF, PROVIDED THE PURCHASER GIVES THE COMPANY IMMERIATE WRITTEN NOTICE OF SUCH DEFECTS, AND PROVIDED FURTHER THAT DURING SAID PERIOD THE APPARATUS SHAIL NOT BE TAXED BEYOND ITS NORMAL CAPACITY SHAIL BE REGULARLY CLEANED AND CARRO FOR, AND SHALL BE OPERATED NORMALLY AND PROPERLY THE COMPANY AGREES THAT THE INSTALLATION SHALL BE DONE IN A THOROUGH AND WORKMANLIKE

Details

Title

Security

Insurance

Attached Specifications

Agreements
Not Expressed

Price

against accidents all his or its employes, and to pay all demurrage incurred by reason of delay due to the Purchaser. The Purchaser agrees to pay the Company any increased cost due to local ordinances, inspection laws, or similar requirements. The Purchaser agrees that the plant site will be such as to involve no unusual expense on the part of the Company during installation work, and if required for the work to build all necessary roadways, runways, wharfage, spur tracks, etc., without charge to the Company.

To enable the Company to proceed with the construction of the apparatus, the Purchaser agrees to furnish promptly on demand by the Company all the necessary information as to details to be determined by the Purchaser and that it will not delay in the doing of any act by it to be performed. In case of delay by the Purchaser shipment shall be extended for a reasonable time based on the period of Purchaser's delay and conditions at the factories of the Company.

The title to the apparatus and material herein agreed to be sold shall not pass from the Company until all payments hereunder shall have been fully made in cash. Upon default in any such payments, the Company may consider the whole amount specified herein as at once due and payable, no matter how evidenced. The Company may retake the property agreed to be sold at any time, if the Purchaser shall have committed any breach of any of the covenants herein contained. In such event any moneys heretofore paid by the Purchaser to the Company shall be presumed to be the amount of damage sustained by the breach of this agreement, and shall be retained by the Company as liquidated damages for breach.

If the Purchaser attaches any of the property herein described to any realty, or attaches it to buildings or machinery already a part of any realty, the title of the Company to such property shall not be disturbed or affected in any way by such action.

The Company may take any security for the due fulfillment of the Purchaser's covenants herein, and the same shall not operate as, or constitute a waiver of, the ownership expressly reserved herein; and such security may be increased, diminished, exchanged or released without in any wise affecting this agreement.

No change made in the character, kind or type of apparatus or material herein described, nor any change made in the price of the same, or the method of payment therefor, shall affect the other terms of this agreement, unless expressly agreed to in writing.

The Company shall keep the property herein agreed to be sold fully insured against damage or loss by fire for the benefit of itself and the Purchaser, as their interests may appear. The cost of such insurance shall be paid by the Purchaser and added to the payments hereinabove specified; but in so insuring the property the Company shall only be held liable for the exercise of a reasonable judgment in the selection of fire insurance company or companies with which it places the risk.

Time is the essence of this contract.

This proposal is for the immediate acceptance of the Purchaser.

Any specifications hereto attached, covering apparatus herein specified, are hereby made a part of this Proposal; but it is agreed that should any of the contract clauses in said attached specifications, other than the actual specifications of apparatus, be in conflict with this Proposal, then said clauses shall not be valid.

There are no understandings or agreements not expressed herein, and nothing is included that is not particularly mentioned.

THE AMOUNT TO BE PAID BY THE PURCHASER FOR APPARATUS, MATERIAL AND THE INSTALLATION THEREOF IS as stated above.

) DOLLARS IN U. S. GOLD COIN

against accidents all his or its employes, and to pay all demurrage incurred by reason of delay due to the Purchaser. The Purchaser agrees to pay the Company any increased cost due to local ordinances, inspection laws, or similar requirements. The Purchaser agrees that the plant site will be such as to involve no unusual expense on the part of the Company during installation work, and if required for the work to build all necessary roadways, runways, wharfage, spur tracks, etc., without character the Company dering the Company contracted to the Company of the Company contracted to the Company of the Company contracted to the Company contracted to the Company of the Company contracted to the Company contracted t

Terms of Payment

PAYMENTS SHALL BE MADE AS FOLLOWS:

ON APPARATUS AND MATERIAL—FIFTY (50) PER CENT ON PRESENTATION OF INVOICE WITH SHIPPING PAPERS;

TWENTY-FIVE (25) PER CENT THIRTY (30) DAYS FROM DATE OF SHIPPING PAPERS;

FIFTEEN (15) PER CENT SIXTY (60) DAYS FROM DATE OF SHIPPING PAPERS;

BALANCE THIRTY-FIVE (35) DAYS AFTER COMPLETION OF CONTRACT.

IF FREIGHT BE PAYABLE BY THE COMPANY THE ABOVE INVOICES WILL INCLUDE FREIGHT.

IF ALL APPARATUS AND MATERIAL SHOULD NOT BE FORWARDED ON THE SAME DATE, PRO RATA INVOICES WILL BE RENDERED AND PRO RATA PAYMENTS SHALL BE MADE FOR PARTIAL SHIPMENTS.

ON CHARGES FOR INSTALLATION WORK—NINETY (90) PER CENT OF THE AMOUNT OF THE WORK ALREADY DONE WHENEVER REQUESTED BY THE COMPANY, SAID AMOUNT TO BE APPROXIMATED ON BASIS OF CONTRACT PRICE:

BALANCE WITHIN THIRTY-FIVE (35) DAYS AFTER COMPLETION OF CONTRACT.

THE CONTRACT PRICE, OR ANY UNPAID PORTION THEREOF, SHALL DRAW INTEREST AFTER PAYMENT IS DUE, AT THE LEGAL RATE UNTIL PAID; AND WHEN THE TIME OF PAYMENT EXTENDS BEYOND THIRTY (30) DAYS, SUCH DEFERRED PAYMENTS SHALL BE EVIDENCED BY NEGOTIABLE NOTE, AT THE COMPANY'S OPTION.

IF COMPLETION OF WORK, OR ANY MATERIAL PART THEREOF, BE DELAYED MORE THAN THIRTY (30) DAYS FOR ANY CAUSE FOR WHICH THE COMPANY IS NOT RESPONSIBLE, FULL PAYMENT SHALL BE MADE WITHINMONTHS FROM DATE OF FIRST SHIPPING PAPERS, FOR ALD APPARATUS SHIPPED AND FOR ALL WORK COMPLETED.

ON FOREIGN AND MINING SHIPMENTS—..... % OF CONTRACT PRICE ON PURCHASER'S ACCEPTANCE OF PROPOSAL;

BALANCE WHEN READY FOR SHIPMENT, IN EXCHANGE FOR SHIPPING PAPERS.

Shipment

THE MATERIAL AND APPARATUS HEREIN DESCRIBED, SHALL BE SHIPPED AS FOLLOWS, OR AS NEAR AS MAY BE:
Four to five weeks

The above shipping dates are made in good faith, based upon promises of manufacturers, time to be reckoned from receipt at respective factories of complete information.

The Company agrees to use every reasonable effort to see that the apparatus and materials are shipped on time, but is not responsible for delays in shipment of apparatus or materials not directly manufactured by the Company.

Date of Completion

THE WORK HEREIN SPECIFIED SHALL BE COMPLETED AND IN READINESS FOR STARTING WITHIN 32 to 4 () months rom date of approval of this Proposal, as herein provided; except that adjustments may be made, insulating material applied, painting done, and minor details not actually pertinent to the starting of the apparatus herein specified may be completed within a reasonable time after said date of readiness for starting. Extension of time will be allowed for time in transit from Eastern factory to plant site, in excess of twenty (20) days for freight shipments, and in excess of five (5) days for express shipments, for any of the apparatus or materials herein specified; extension of time will also be allowed for delays due to custom authorities, etc. The above time of completion will be extended by the period of time required for drying out of brickwork, for the setting of concrete, etc., for any repairs or replacements found necessary after starting the plant and during the breaking-in period, and also for tests, if herein specified.

Place of Delivery

The property herein mentioned shall be delivered at the plant site of the Purchaser at Winchester,

Idaho

that being the point of installation. All freight from
to railway depot now nearest the place of delivery to
be paid by the Company

All unloading, cartage and hauling from said railway depot to plant site to be paid for by the Company

If the Purchaser is not ready to receive the property on arrival at destination, the same shall be stored at the expense of the Purchaser.

ON APPARATUS AND MATERIAL FIFTY (80) PER CENTOR PRESENTATION OF INVOICE WITH SHIPPING PAPERS:
TWENTY-FIVE (25) PER CENT TAINTY (30) DATS FROM DATE OF SHIPPING PAPERS;
FIFTHER (10) PER CENT SIXTY (60) DATS FROM DATE OF SHIPPING PAPERS;
BALLARGE TELETY-FIVE (35) DAYS AFTER COMPLICTION OF CONTRACT.
IN PRESENTATION OF TAIL STATE OF THE COMPLANY THE ABOVE INVOICES WHAT INCLUDE PRESENT.

Operation and Test of Plant

Guarantees

Acceptance

Approval

UNLESS OTHERWISE HEREIN SPECIFIED THE COMPANY AGREES TO FURNISH AN EXPERT FOR A PERIOD OF

() days to instruct the Purchaser's operators and employes in the operation, adjustment and care of the apparatus herein specified. The Purchaser agrees to furnish all necessary engineers, firemen and other operators, fuel, lubricating oil, waste, supplies, load, etc., for the starting and running of the plant.

If tests are required, all expenses of performance or efficiency tests such as supplies above mentioned, and all necessary appliances, apparatus and instruments shall be furnished by the Purchaser, free of charge to the Company. The Company will, on the request of the Purchaser, furnish the services of an engineer to assist in the conducting of such tests at a charge per day as shall be agreed upon, but the expense due to all observers on test and the cost of collecting and tabulating all data shall be paid by the Purchaser.

It is agreed that the Purchaser assumes all responsibility for losses to its or his own business should he request that plant undertake carrying of service or load before the trial period of plant, or from any interruption which may occur during the adjustment of the plant.

The Purchaser agrees that the plant or any of the apparatus thereof shall not be taxed to run under conditions in excess of its rated capacity unless at its or his own risk, and that the Company's directions as to the operation and management shall be carefully observed.

EXMENSION SALES AND SECONDARY AND SECONDARY AND SUCCESSION SHOPS AND SUCCESSION SHOWS AND SUCCESSION SUCCESSION SHOWS AND SUCCESSION SUCCESSION

All payments contingent upon starting, acceptance or test of machinery shall become due in cases where, owing to conditions over which the Company has no control, the Purchaser has failed to start, accept, or test the machinery within a period of thirty (30) days after formal tender by the Company. In such event the apparatus, material and labor shall be considered accepted and shall be paid for without starting or test.

This contract shall not be valid unless personally signed by the President or Vice-President of the Company, and shall be deemed to have been executed in the City and County of San Francisco, State of California, on the date of approval, and no modification or alteration of the same shall be binding on the Company until such modification or alteration shall have been approved in writing by said President or Vice-President.

CHAS. C. MOORE & CO. ENGINEERS,

Purchaser's Acceptance To CHAS. C. MOORE & CO. ENIGNEERS,

Your proposal as above is hereby accepted this....

(SEAL)

los mohatas

Silla shand L. S.

Company's Approval Approved, San Francisco, Cal.,....

CHAS. C .MOORE & CO. ENGINEERS

Final

By allgin Ho

Vice-President.

Secretary.

Cable Address NEW YORK "GLOVEBOXES" ALL FOREIGN OFFICES "BABCOCK

NEW YORK, 85 LIBERTY ST.



BOSTON. 49 Federal Street. PHILADELPHIA, North American Building. PHITSBURGH, Farmers Deposit Bank Bldg. CLEVELAND, Guardian Bldg. CINCINNATI, O. Traction Bldg. ATLANTA, SA. Cuntler Bldg. NEWORLEANS, 521-5 Baronne St. HOUSTON, TEXAS, Southern Pacific Bldg TUCSON, ARIZONA, 21 So. Stone Ave.



CHICAGO, Marquette Bldg DETROIT, MICH. 411 Ford Bldg.
DENVER, 435 Seventeenth St.
SALT LAKE CITY, 705 Chearns Bldg. SEATTLE. 1914-17L.C.Smith Bldg. SAN FRANCISCO. Sheldon Bldg. LOS ANGELES. 404-6 Central Bldg. HAVANA. CUBA. Calle de Aguiar 104 SAN JUAN PORTO RICO, Royal Bank Bldg.

SPECIFICATION S-2673

For and in consideration of the hereinafter named amount

March 17.

23

HORSE-POWER

AND ARRANGE-

MENT

WE PROPOSE TO FURNISH TO

CRAIG MOUNTAIN LUMBER CO.

WINCHESTER. IDAHO

492.2 H.-P. STIRLING WATER TUBE BOILERS

(One H.-P. Equals 341/2 Lbs. of Water Evaporated from and at 212° Fahr. per Hour)

One UNITS OF 492 H.P. EACH SET EXXXXXX

EXTERX

MANNER SINGLY, DECENCERAND, I LEFT HAND, EACH UNIT HAVING 492.2 SQUARE FEET OF

HEATING SURFACE AND NO SOUARE FEET OF GRATE SURFACE.

IN ACCORDANCE WITH THE FOLLOWING SPECIFICATION

The heating surface of _____boiler to consist of three steam and water drums and a mud drum, as follows:-

	Diameter	Length	Thickness of Drum Plates
STEAM DRUMS	42 ins.	16 ft 4-1/8 ins.	11/16 ins.
MUD DRUM	48 ins.	14 ft 1-5/8 ins.	13/16 ins.

tions between all parts to be made by expanding seamless steel tubes into drilled tube seats.

All wrought metal for pressure parts to be of the best open hearth steel and having chemical and physical properties in strict accordance with the Boiler Code of The American Society of Mechanical Engineers, and as required in the state in which the boiler will be installed.

All flanges for blow-off, feed, safety valve and water column connections to be made of wrought steel and riveted to the drums.

The cylindrical portion of each drum to be made of a tube plate and a shell plate. The longitudinal seams to be riveted, butt-strapped inside and out, the circular seams to be single-riveted, lap-joint.

All holes for seams to be punched 1/4 inch smaller than the diameter of rivets as driven, and reamed out to full size after the plates are rolled and assembled. All rivets to be driven by hydraulic pressure and held until black.

HEATING SURFACE

SPECIFICATION OF OPEN HEARTH STEEL

DRUM CON-STRUCTION DRUM HEADS

MANHOLE

TUBES

VALVES AND FITTINGS



One head of each drum to be fitted with a manhole 12 inches by 16 inches. The heads to be hydraulic forged at a single heat, the manhole to be flanged inward, and the face to be turned off true.

The manhole plate and the guards to be of forged steel. The plate to be faced and turned to fit head.

Tubes to be 3¼-inch hot rolled seamless steel, No. 11 gauge for boilers built for a working pressure of 160 pounds, No. 10 gauge for boilers built for a working pressure of 180 pounds up to and including 225 pounds,



and No. 9 gauge for boilers built for working pressure above 225 pounds up to and including 260 pounds.

The distance between tube centers measured along the drum length will be alternately wide and narrow, so that any tube can be removed without its being necessary to remove other tubes.

Each boiler will be supplied with the following valves and fittings:

Crane Co.'s brass seat safety valves of size and number to meet the requirements of the A. S. M. E. Boiler Code.

One Ashcroft steam gauge with 12-inch dial.

One B. & W. water column fitted with B. & W. bronze mountings for glass water gauge, with shut-off device operated from fire-room floor, to allow renewal of glass when under pressure. Three B. & W. try cocks with lifting handles for operating from fire-room floor, fitted with steam metal valves. Independent blow-off pipes from bottom of column and glass gauge, to be carried down the front, terminating in the ash pit, to be fitted with valves at height of hand.

One combination drum head stop and check valve for feed, inches in diameter.

2½-inch BABCOCK & WILCOX blow-off valve, set in tandem with Gato cocks.

Heavy pipe and fittings to be used to connect all the above mountings to the boiler and necessary brackets for attaching water column to be supplied. Water column connections to be provided with flange union joints to allow them to be cleaned inside.

STEAM

SUPPORTS

FRONT

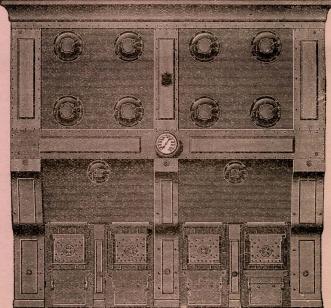
The main steam outlet to be flanged.

15 inches flange.

Height above floor line. 20 ft. 8 inches.

Each boiler to be supported on a steel framework entirely independent of the setting to allow for contraction and expansion without straining either the boiler or the brickwork and to allow for repairs or renewal of the latter without disturbing the boiler or its connections.

An appropriate front of ornamental design to be furnished. The upper half to be of wrought steel and to consist of pilasters and a string course, panel plates fitted with doors for the removal of tubes, and a cornice bearing such name as the Purchaser may specify. The lower half to consist of top panel of steel, **** Columns, and bottom panel, the latter to be fitted with firing and ash-pit doors of the counterbalanced type, unless otherwise ordered.



This lower half of front to be moved out

..... so ouppied with cath bollet .

Dead plates and supports, the plates to be arranged for a fire-brick lining.

A full set of cleaning and ash doors and frames for side and rear walls, giving access to all parts for exterior cleaning. A large circular door and frame for access to mud-drum manhead.

A cast-iron damper box and damper together with damper operating rig. The damper box, on which a stack or breeching may be set, to be supported on boiler structural supports; or if desired by Purchaser, set to allow a breeching connection to be made in the rear.

Necessary buckstays and tie rods for securing all parts in position, and supports for baffle walls.

Necessary dutch oven iron work. Necessary auxiliary air
inlet dampers.

The following equipment of tools shall be furnished for the boilers specified:

_____steel wrench____for hand-hole nuts.

No driven turbine tube cleaner.

set......of fire tools, consisting of poker, slice bar and hoe.

set _____of metal steam hose, and cleaning pipe with special nozzle and 3/4-inch stop valve connected to steam space for blowing dust and soot from the exterior of the tubes.

The boiler specified will be built in accordance with the Boiler Code of The American Society of Mechanical Engineers and a certificate of shop inspection by the Hartford Steam Boiler Inspection & Insurance Co., or other qualified inspection company will be furnished.

The boiler as specified to be constructed for a working pressure of 160 pounds per square inch.

All drums to be tested and made tight under hydrostatic pressure of 240 pounds before leaving the shop.

When erected complete, boiler to be tested and made tight under a hydrostatic pressure, which shall be 50 per cent. greater than that for which the boiler is constructed. Purchaser shall provide the water required for said test, means to introduce it into the boiler when test is to be made, and provide drainage from blow-off during test.

Approximate shipping weight 87,000 pounds.

	Width	Depth	Thickness of Walls
For one battery of two boilers For one boiler set half battery For one boiler set singly	ft. ins. ins. ins. ins. ins. ins.	ftinsinsinsinsins.	Side Center ins. ins. ins.

(If stokers are to be installed, above figures do not include stoker arches nor brickwork incidental to stoker installation.)

Full drawings for the foundations and setting of the boiler will be furnished. THE BABCOCK & WILCOX

Co. will also furnish the services of a skilled mechanic, who will supervise the erection of the iron work of the boiler and leave it ready for Purchaser to install steam, water, blow-off and smoke connections, and brickwork, including placing of cleaning doors and damper.

C. C. M. &C. Mall provide all labor, scaffording, blocking and rigging necessary for erecting the boiler promptly.

The hours of labor for the erecting superintendent and for such labor as The Babcock & Wilcox Co. may supply for erecting the iron work of the boiler or boilers shall be the same as are in vogue at the plant of Purchaser. The erecting superintendent will have instructions not to work over-time without a written order from the Purchaser, in which event the number of hours over-time shall be charged to the Purchaser at the difference in rate between straight time and over-time.

C.C.M. & Co. shall pay the erecting mechanic's board, traveling and incidental expenses, and transportation on tools to and from the site of erection.

TOOLS

WORKING PRESSURE TESTING

SHIPPING WEIGHT SPACE OCCUPIED

BRICKWORK

ERECTION

Purchaser shall advise The BABCOCK & WILCOX Co., at Bayonne, N. J., of the arrival of the material to be furnished on this contract, naming the date upon which the erecting mechanic will be needed.

Purchaser shall install foundations complete in conformity with drawings before the erecting mechanic arrives on the ground.

Purchaser shall provide space in which to erect the boilers, with free access thereto, together with such openings in walls, pavements, areas or roofs as may be necessary to enable the boilers to be moved in and erected.

If Purchaser shall furnish the workmen for the erection of such boiler or boilers, or The Babcock & Wilcox Co. or its erecting superintendent shall employ such workmen for the account of Purchaser, Purchaser is to indemnify THE BABCOCK & WILCOX Co. and save it harmless from any liability or damage to such workmen,

or to any persons or property, resulting from negligence of such workmen.

To be delivered f. o. bcars Barberton, Ohio, freight allowed to Winchester, Edaho, at the rates set out in Chas. C. Moore & Co. Engineers' proposal.

THE BABCOCK & WILCOX Co.'s liability as to damage to material in transit ceases upon delivery of material in good order to a common carrier at Barberton, O. Unloading and hauling material between points of delivery by rail or water transportation lines and site of erection are not provided for by this contract, and if required must be done by Purchaser.

Price as per accompanying letter and as given in the acceptance.

Payable in New York Exchange.

Sixty-five per cent. on presentation of sight draft with bill of lading. Thirty-five per cent., 60 days from date of shipment.

Foreign and mining shipments on presentation of bills of lading.

Should shipment be deferred beyond contract shipping date upon request of Purchaser, 65% of contract price shall nevertheless be due and payable on contract shipping date, and 35% sixty days from date of actual shipment; it being understood and agreed that in the event of shipment being so deferred for six months or more such final payment of 35% shall be due and payable at the expiration of such period of six months.

THE BABCOCK & WILCOX Co. agrees to exercise reasonable care and diligence in the selection of material required for, and in the manufacture of, such boiler or boilers sold hereunder. The liability of THE BABCOCK & WILCOX Co. under the foregoing warranty is expressly limited as follows. It will furnish without charge f. o. b.

Barberton any of the pressure parts of such boiler or boilers as under proper and normal conditions of use shall prove defective in workmanship or material within one year from the date of installation on the Purchaser's premises, provided written notice of the defect is given it by the Purchaser as soon as the same is apparent. In no case shall THE BABCOCK & WILCOX Co. be liable for any other loss or damage whatsoever, whether resulting from the non-operation of the plant in which the boiler or boilers are used, or otherwise. No warranty is to be implied from the manufacture, sale, furnishing or erection of the said boiler or boilers, or any articles or material herein described, or to be furnished hereunder, and the liability of The Babcock & Wilcox Co. is expressly limited to the extent hereinbefore stated.

Delivery and erection herein called for are contingent upon fires, floods, strikes, lockouts, riots or accidents in the works of The Babcock & Wilcox Co. or the works of those furnishing it material, inability to obtain skilled labor or material, delays in transportation, or any other causes whatsoever beyond the reasonable control of The Babcock & Wilcox Co. which may delay or prevent delivery or erection. Until all of the property furnished under this proposal shall have been fully paid for in cash, the title and right of possession thereto shall remain in The Babcock & Wilcox Co., and any payments made on account of the purchase price shall in case of any default in payment be deemed to be for the use and wear of such property. The acceptance of notes, or any renewal thereof, or any security for the purchase price, shall not operate as a waiver or transfer of such title or right of possession.

This proposal shall be void if not accepted within 30 days from the date thereof.

This proposal is made in duplicate and shall become a contract between the parties when accepted by the Purchaser. There are no understandings between the parties as to the subject matter of this contract other than as herein set forth. All previous communications between the parties hereto, either verbal or in writing, are hereby abrogated. Nor can this contract be modified other than by a duly approved supplementary agreement signed by both parties.

DELIVERY

PRICE TERMS

WARRANTIES

GENERAL CONDITIONS

B.&W .--PL-A 11-21

THE BABCOCK & WILCOX CO.

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