

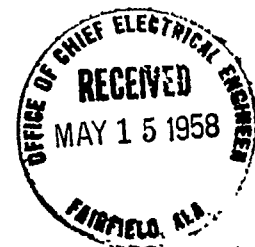
May 14, 1958

*File*  
*5-21*  
Fairfield Tin Mill

Facilities for Increased Water

(Tinning Dept)

SHOOK & FLETCHER SUPPLY CO.



- 1 10" Brassert Model "A" Automatic Self-Cleaning Strainer, with body of heavy duty cast iron construction to operate at 75 psig working pressure and equipped with 20 x 20 mesh stainless steel conical screens.

The unit shall have an inlet capacity of 4,500 gpm of water at 80 to 100°F and 45 to 60 psig and with a pressure drop not to exceed 2 psig and not require more than 225 gpm backwash water. Drum operating motor shall be totally enclosed, 220  $\frac{1}{2}$  HP. volt, 60 cycle, 3 phase. Inlet and discharge connections shall be flanged and drilled to 125# Standard.

SHEET NO. 1

*Start & P.B. ordered 5-22-58*

USS-8023

1G  
Property

5/14/58

C D - 13766.

USHO 002319

May 14, 1958

Fairfield Tin Mill  
Facilities for Increased Water

SHEET NO. 2

Furnish 5 sets of certified prints, operating instructions and parts lists upon receipt of order.

In accordance with our Inquiry HB-1585 and your proposal from S.P. Kinney Engineers No. KN-6375 dated Jan. 31, 1958.

Ref. Dwg: D-70517

July 1, 1958

Fairfield Steel Works  
Fairfield, Ala.  
E. N. Glasgow  
#3 Storehouse

J. W. Ogletree - JNM

USS-8023

16  
Property

5/14/58

C D - 13766

USHO 602410

CONTRACT NO. **KC 1448**

S. P. KINNEY ENGINEERS, INC., CARNEGIE, PA.

SHEET 1 OF 1

BILL OF MATERIAL FOR Spare Parts for 10" Ind. 1/2" Automatic Self-Cleaning Strainer

COMPANY **TENNESSEE COAL AND IRON CO. UNITED STATES STEEL CORP. FAIRFELD, ALA.**

| ORDER NO. | NO. REQ'D. | DESCRIPTION                                                       | DRAWING   | ITEM NO. | MATERIAL                          | REMARKS | WEIGHT EACH | TOTAL WEIGHT |
|-----------|------------|-------------------------------------------------------------------|-----------|----------|-----------------------------------|---------|-------------|--------------|
|           | 1          | 1/2 HP Vertical Motor, 3 Phase, 60 Cycle, 220/440 Volts, 1800 RPM | 732-E     | 1        |                                   |         |             |              |
|           |            | FR. No - 182-D TENN.V.                                            |           |          |                                   |         |             |              |
|           | 1          | Pinion                                                            | X-7532    | 1        | Steel                             |         |             |              |
|           | 2          | Pin                                                               | X-7532    | 2        | Steel                             |         |             |              |
|           | 1          | Pinion                                                            | X-7534    | 1        | Steel                             |         |             |              |
|           | 2          | Pin                                                               | X-7534    | 2        | Steel                             |         |             |              |
|           | 1          | Pinion                                                            | X-7534    | 1        | Steel                             |         |             |              |
|           | 1          | Set Screw                                                         | 3-7576    | 2        | Steel                             |         |             |              |
|           | 1          | Gear                                                              | XX-6630   | 1        | Steel                             |         |             |              |
|           | 1          | Gear                                                              | XX-6633   | 1        | Steel                             |         |             |              |
|           | 1          | Gear                                                              | XX-6631   | 1        | Steel                             |         |             |              |
|           | 1          | Bushing                                                           | XV-8629-A | 1        | Bronze                            |         |             |              |
|           | 1          | Bushing                                                           | XC-8629-A | 2        | Bronze                            |         |             |              |
|           | 1          | Bushing                                                           | XX-8629-A | 4        | Bronze                            |         |             |              |
|           | 1          | Bushing                                                           | XX-8629-A | 6        | Bronze                            |         |             |              |
|           | 2          | Ball Bearings                                                     | 7351-A    | 4        | Steel                             |         |             |              |
|           | 1          | Ball Bearings                                                     | 7351-A    | 6        | Steel                             |         |             |              |
|           | 2          | Sets Protruding                                                   | 7351-A    | 34       | MAILED                            |         |             |              |
|           | 34         | Straining Media                                                   | 7351-E    | 2        | STAINLESS STEEL CONTS 20X 20 MESH |         |             |              |
|           | 34         | Repairing Pin                                                     | X 2660    | 1        | BRONZE                            |         |             |              |
|           | 1          | MAIN SHAFT                                                        | KX-8627   | 1        | STEEL                             |         |             |              |
|           | 1          | CONC -                                                            | 7854      | 2        | C.I.                              |         |             |              |

REVISION

MADE BY **NFB 6-10-58**

CHECKED BY

BILL OF MATERIAL NO. **B-2644 S.P.**

Serial No.

USHO 003821



08HO 002515

# **S. P. KINNEY ENGINEERS, Inc.**

201 SECOND AVENUE

CARNEGIE, PENNSYLVANIA

## INSTALLATION AND MAINTENANCE

### OF THE

### MODEL "A" AUTOMATIC SELF-CLEANING STRAINER

#### Installation

The strainer should be erected on a solid foundation, preferably of concrete, and carefully leveled before grouting. The inlet side of the strainer is marked "IN". Sufficient space should be left around the strainer for access to inspection holes and piping. Sufficient headroom should also be available for lifting out the rotating cone and main shaft.

A valved by-pass should be provided around the strainer in order to shut down the machine for inspection (see Bulletins 504.2 and 504.3). A Kinney Automatic Plug Valve or a gate valve should be placed in the backwash piping near the strainer to provide regulation of the backwash. This piping should discharge into an open funnel for observation. Backwash piping should not be trapped but should pitch downward from the strainer connection. Pressure gauges should be connected to the tapped holes provided at the side of the inlet and outlet necks of the strainer.

USHO 002323

The strainer body is provided with drain plugs for removing heavy solids which may settle out; also to drain the machine in cold weather to prevent damage from freezing.

#### Putting The Strainer In Operation

First, open petcock on top cover to allow escape of all air as strainer fills with water, start motor, open inlet, and close petcock when a solid stream of water appears, open outlet, and then open backwash valve in the order named.

The amount of backwash should be regulated by means of the valve in the backwash line to about 2% of the total water cleaned, but not more than 5%. The drop in pressure between the inlet and outlet of the strainer should be fairly constant (as indicated on the gauges).

A constant low differential pressure across the machine indicates proper backwashing. Normal differential pressure is about two (2) to three (3) pounds per square inch. Should the differential pressure build up above these amounts, the backwash water should be increased by opening the backwash valve.

#### Lubrication

For the enclosed gear case, we recommend a lead naphthate base gear oil; above 10° F. Sun Oil Company, "Sunep" 130 or approved equal; below 10° F., "Sunep" 90 or approved equal. Check oil monthly, drain and refill yearly.

The bottom bearing located beneath the strainer is provided with an alenite grease fitting. For recharging the chamber, use adhesive pressure grease, K-heavy, or approved equal is recommended. Grease monthly.

#### Packing

When necessary to replace packing in the stuffing boxes, we can furnish packing from stock. Care should be taken to replace all packing with size originally supplied.

#### Shutting Down

If this machine is taken out of service, be sure to remove the inspection hole cover and apply cup grease to the entire surface of the drum while it slowly rotates. This is important, as the various points of contact between the drum and body may corrode and "freeze" together if the strainer is idle for any length of time.

#### Adjusting

If motor becomes overloaded, make upward adjustment of cone with set screw provided in bottom bearing housing. This upward adjustment increases clearance between strainer cone and backwash pads.

#### Manual Operation

The strainer cone can be rotated by depressing and turning the spring loaded idler shaft located on top of the gear box.

Enclosures  
Bulletin 504.2  
Bulletin 504.3

USHO 002325

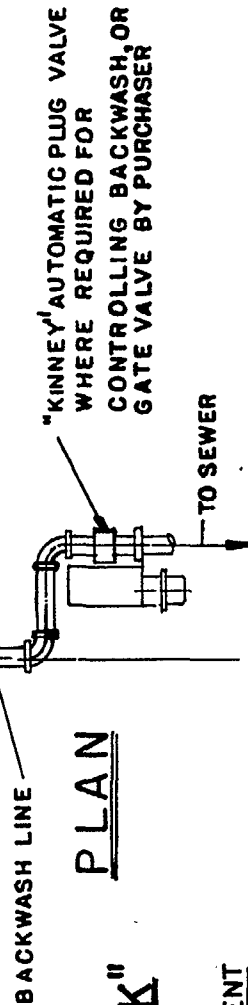
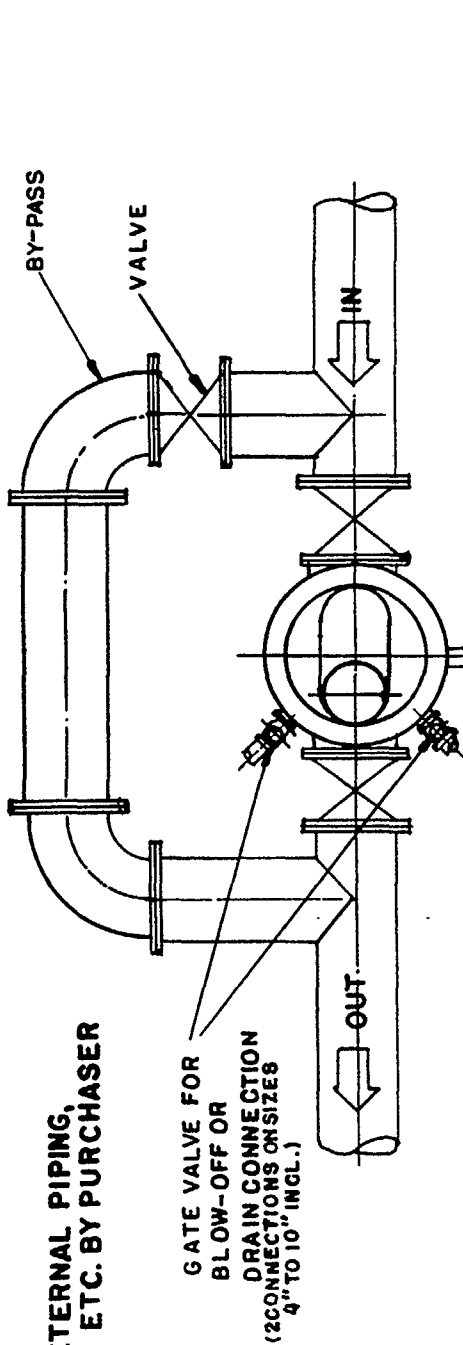
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S. P. KINNEY ENGINEERS, CARNEGIE, PA.

X-7751

REV.

NOTE:  
ALL EXTERNAL PIPING,  
VALVES ETC. BY PURCHASER



PLAN

**KINNEY MODEL "A" & "K"**  
**STRAINERS**  
TYPICAL PIPING ARRANGEMENT  
FOR SIZES 2" TO 10" INCLUSIVE  
SINGLE BACKWASH

MODEL "A" STRAINER  
OR MODEL "K" STRAINER

PRESSURE GAUGES

BACKWASH LINE

USHO 002326

BLOW-OFF OR DRAIN

ELEVATION

FOUNDATION  
BY PURCHASER

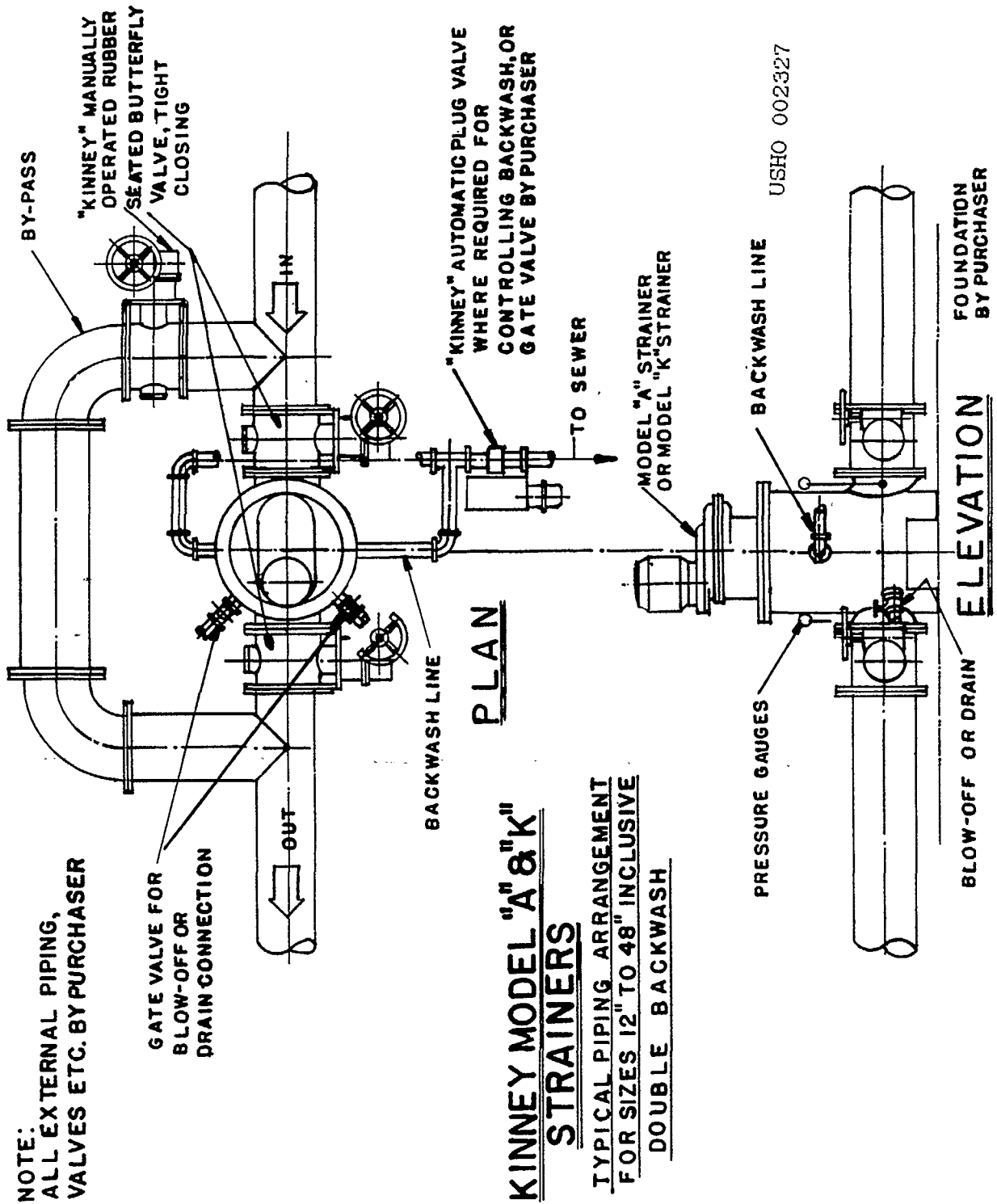
REVISED

DRAWN BY N. E. RADEL DATE 8-24-56 CHECKED BY \_\_\_\_\_ SCALE NONE APPROVED BY \_\_\_\_\_

S. P. KINNEY ENGINEERS, CARNEGIE, PA.

X-7750

REV.



REVISED \_\_\_\_\_