

REPORT ON MACHINERY.

No. 2675

REC'D NEW

March 21-1918

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of SAN FRANCISCO

No. in Survey held at SAN FRANCISCO

Date, First Survey SEPT 11 1917 Last Survey MAR 1 1918

Reg. Book.

(Number of Visits 38)

on the S. HERBERT H. PRATT

Tons
Gross
Net

Master BENNET Built at OAKLAND CAL By whom built BETHLEHEM SHIPBUILDING CORP. (UNION PLANT) When built 1916
Engines made at SCHENECTADY N.Y. By whom made GENERAL ELECTRIC COMPANY when made 1917
Boilers made at SAN FRANCISCO By whom made BETHLEHEM SHIPBUILDING CORP. (UNION PLANT) when made 1916
Registered Horse Power 434 Owners ATLANTIC REFINING COMPANY Port belonging to PHILADELPHIA RA
Shaft Horse Power at Full Power 2600 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

URBINE ENGINES, &c.—Description of Engines CURTIS GEARED TURBINE No. of Turbines ONE

Diameter of Rotor Shaft Journals, H.P. L.P. Diameter of Pinion Shaft
Diameter of Journals Distance between Centres of Bearings Diameter of Pitch Circle
Diameter of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel
Width of Face Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted
No. of Screw Shafts ONE Diameter of same as per rule as fitted 14.08" Diameter of Propeller 17.0" Pitch of Propeller 13.6"
No. of Blades 4 State whether Moveable YES Total Surface 854" Diameter of Rotor Drum, H.P. L.P. Astern
Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine Propeller

ARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION									
2ND									
3RD									
4TH									
5TH									
6TH									
7TH									
8TH									

No. and size of Feed pumps 2- 12" x 7" x 16"

No. and size of Bilge pumps 1- 16" x 10" x 14, 2- 7" x 6" x 10

No. and size of Bilge suction in Engine Room 4- 3" x 1/2"

In Holds, &c. FIREBRN 1- 3" FIREBRN TWEEN DECK Suction 2- 2"

CHAIN LOCKER - 1- 2" FOREHOLD 2- 3" FORE COFFERDAM 2- 3" AFTER COFFERDAM 2- 2" AFTER PEAK 1- 3"

No. of Bilge Injections 1 sizes 12" Connected to condenser, or to circulating pump CIRCULATING Is a separate Donkey Suction fitted in Engine Room & size YES 3/4"

Are all the bilge suction pipes fitted with roses YES Are the roses in Engine room always accessible YES

Are all connections with the sea direct on the skin of the ship YES Are they Valves or Cocks VALVES

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Discharge Pipes above or below the deep water line ABOVE

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YES

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel WORTH BROS PHILADELPHIA PA

Total Heating Surface of Boilers 9750" Is Forced Draft fitted NO No. and Description of Boilers 3 HIENE MARINE TYPE WATER TUBE

Working Pressure 250 Tested by hydraulic pressure to 500 Date of test 16-11-17 26-11-17 No. of Certificate 10-10-105

Can each boiler be worked separately YES Area of fire grate in each boiler No. and Description of Safety Valves to

each boiler 2 SPRING LOADED Area of each valve 7.06" Pressure to which they are adjusted 250 Are they fitted with easing gear YES

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 54 7/8" Length 12-5 1/2" Material of plates STEEL

Thickness 7/8" Range of tensile strength 60000 Are the shell plates welded or flanged NO Descrip. of riveting: cir. seams SINGLE

long. seams T.R.D.B. Diameter of rivet holes in long. seams 1" 1/16 Pitch of rivets 7/8" Lap of plates or width of butt straps 16 3/4"

Per centages of strength of longitudinal joint rivets 120% Working pressure of shell by rules 267 Size of manhole in shell 16 x 12

Size of compensating ring FLANGED No. and Description of Furnaces in each Boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

bottom Thickness of plates bottom HEADER plates: Material STEEL Thickness: Sides 3/4" Back 3/4" Top 5/8" Bottom 5/8"

Working pressure of furnace by the rules Combustion chamber If stays are fitted with nuts or riveted heads RIVETED Working pressure by rules 340

Pitch of stays to ditto: Sides 6" x 6 1/2" Back 6" x 6 1/2" Top AREA Material of stays STEEL at smallest part 2.07 Area supported by each stay 42.25 Working pressure by rules 440 End plates in steam space

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes 3" Pitch of tubes 6" x 6 1/2" Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter

Thickness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets

Working pressure of shell by rules Crown plates: Thickness How stayed

SUPERHEATER. Type U. I. W. ✓ Date of Approval of Plan TYPE 1915 ✓ Tested by Hydraulic Pressure to 750 ✓
Date of Test MAY 23 ✓ 1917 ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler YES ✓
Diameter of Safety Valve 1" ✓ Pressure to which each is adjusted 250 ✓ Is Easing Gear fitted NO ✓

IS A DONKEY BOILER FITTED? NO ✓ If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 TAIL SHAFT WITH PROPELLER & NUT—1 SET MAIN COUPLING BOLTS
1 SET OF THRUST COLLARS. 1 SET STEAM TURBINE BEARINGS—1 HIGH SPEED PINION—1 HIGH SPEED SHAFT WITH
COUPLING—1 SET OF HIGH SPEED PINION BEARINGS—2 LOW SPEED PINION BEARINGS—1 LOW SPEED SHAFT BEARING
1 SET DILGE PUMP VALVES—1 SET FEED PUMP VALVES—50 CONDENSER TUBES—2 PROPELLER BLADES
ASSORTED IRON.

The foregoing is a correct description,

HEBREW SHIPBUILDING CORPORATION, LIMITED
UNION PLANT.

Dates of Survey while building	During progress of work in shops - -	SEPT. 1-12-13-17-28-OCT 5-9-13-26-NOV 2-15-16-20-23-28 DEC 7-18-19-26
	During erection on board vessel - -	NOV 9-13-16 DEC 19-30 JAN 3-9-15-24 FEB 1-4-6-8-13-15-19-26-27-MAR 1
	Total No. of visits	38

Is the approved plan of main boiler forwarded herewith

Is the approved plan of main boiler forwarded herewith..... YES

“ “ “ *donkey* “ “ “

Dates of Examination of principal parts—Casings Rotors Blading Gearing

Rotor shaft Thrust shaft ✓AY 3¹² Tunnel shafts — Screw shaft NOV 1¹ Propeller NOV 1

Stern tube OCT 9 Steam pipes tested FEB 6 Engine and boiler seatings NOV 1 Engines holding down bolts 1903

Completion of pumping arrangements FEB 6 Boilers fired NOV 1 Engines tried under steam FEB 10th

Main boiler safety valves adjusted MAR 1st Thickness of adjusting washers LOCK NUTS

Material and tensile strength of Rotor shaft	Identification Mark on Do.

Material and tensile strength of Pinion shaft	Identification Mark on Do.

Material of Wheel shaft..... Identification Mark on Do. XXXX Material of Thrust shaft STEEL Identification Mark on Do. No 1

Material of ~~Tunnel~~ shafts **STEEL** Identification Marks on Do. **FLA. 1924** Material of Screw shafts **STEEL** Identification Marks on Do. **NO 2**

Material of Steam Pipes STEEL ✓ Test pressure 750 ✓

Is an installation fitted for burning oil fuel. **YES** ✓ Is the flash point of the oil to be used over 150°F. **YES** ✓

Have the requirements of Section 49 of the Rules been complied with YES ✓

If so, state name of vessel *U.S. J. F. O'NEILL*

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery & Boilers of this vessel

were constructed under special survey of materials tested to Rule Requirements & workmanship was found sound throughout. On completion the Machinery was thoroughly tested under working conditions with satisfactory results. In the opinion of the undersigned the machinery is eligible to be classed in the Register Book * L.M.C 3-15 Fitted for Oil Fuel 3-15 Flash point above 150°

Electric light

Turbine casing no 12404

Gear casing no 2539.

It is submitted that this vessel is eligible for 1 Geared Steam Turbine
THE RECORD. + L. M. C. 3. 18.

Fitted for oil fuel 3. 18. F.P. above 150° F. 992
Water Tube boilers Annual Survey. (1/17)

The amount of Entry Fee ... £ 15.00 :) When applied for,

Special £ 208.50 : Mar 13 1918

Donkey Boiler Fee £ When received,

Travelling Expenses (if any) Nil 11-50 as per 14122 Memo 18

(1/3 of mach. fee, or \$69.50 to be credited N.Yk.

Committee's Minute New York MAR 26 1918

Assigned + dmb 3.18 Fitted for oil fuel 3.18 T. above 150°.

Elec. Light

MACHINERY CERTIFICATE
9-4-18

Lloyd's Register
Foundation