

REPORT ON MACHINERY.

No. 30231

Received at London Office

MON 29 DEC 1918

Date of writing Report Nov 12 1918 When handed in at Local Office Nov 13 1918

Port of Philadelphia Pa

o. in Survey held at Chester Pa Date, First Survey Jan 24 1918 Last Survey Nov 9 1918

Reg. Book. 17 on the Screw Steamer "La Brea Brea"

Master J. A. Grant Built at San Francisco By whom built Union Oil Co. Nokes

Engines made at Chester Pa By whom made Sun Ship-Bldg Co when made 1915

Boilers made at By whom made when made

Registered Horse Power Owners Union Oil Co of California Port belonging to Los Angeles

Tom. Horse Power as per Section 28 585 514 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted

Engines, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27-45 1/2-46 Length of Stroke 51 Revs. per minute 75 Dia. of Screw shaft as per rule 14 1/2 Material of screw shaft as fitted 15

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight

In the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush

Dia. of Tunnel shaft as per rule 13.96 Dia. of Crank shaft journals as per rule 14.65 Dia. of Crank pin 15 1/2 Size of Crank webs 10 1/2 Dia. of thrust shaft under

collars 15 Dia. of screw 14 1/2 Pitch of Screw 14-5 No. of Blades 4 State whether moveable Yes Total surface 86 1/2

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

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

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

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

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

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

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

BOILERS, &c.—(Letter for record Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure 190.75 Tested by hydraulic pressure to Date of test No. of Certificate

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

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring 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 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

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

Area 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 Pitch of tubes 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 Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 conn rod top and bottom bolts and nuts
2 main bearing bolts, 2 sets coupling bolts, 1 set feed and bilge pump valves
1 set of piston rings for each engine, 1 propeller shaft, 1 propeller blade, 1 pair
connecting rod brasses, and crankhead brasses, 1 set link brasses, 1 eccentric strap complete
a quantity of assorted bolts and nuts. Iron of various sizes.

The foregoing is a correct description,

Wm. H. H. G.

Sun Shipbuilding Co.
CHESTER, PA.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - Jan 24. April 1. May 22-25. May 31. June 11-18. 20 July 1-6. Aug 2-21 Sept 13.
During erection on board vessel - - Sept 24-28 30. Oct 10-18-21 29. Nov 1-9.
Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 6-7-18 Slides 20-6-18 Covers 20-6-18 Pistons 25-4-18 Rods 25-4-18
Connecting rods 25-4-18 Crank shaft 6-7-18 Thrust shaft 2-8-18 Tunnel shafts Screw shaft 28-9-18 Propeller 10-10-18
Stern tube Steam pipes tested 1-11-18 Engine and boiler seatings 18-10-18 Engines holding down bolts 29-10-18
Completion of pumping arrangements Boilers fixed Engines tried under steam 9-11-18
Completion of fitting sea connections Stern tube Screw shaft and propeller 28-9-18
Main boiler safety valves adjusted 9-11-18 Thickness of adjusting washers Lock nuts.
Material of Crank shaft Steel Identification Mark on Do. 2998 W.S.S. Material of Thrust shaft Steel Identification Mark on Do. 3493 W.S.S.
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 1410 J.B.D.
Material of Steam Pipes Lap welded steel Test pressure 540 lbs.

Is an installation fitted for burning oil fuel

Is the flash point of the oil to be used over 150°F.

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

Is this machinery duplicate of a previous case

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines have been constructed and fitted on board under special survey. The materials and workmanship are sound and good and the engines proved satisfactory on steam trial.

The main boiler safety valves have been set to 195 lbs per sq in to conform with shafting of the new reciprocating engines, that have replaced the geared turbines. A new thrust shaft has now been fitted to vessel.

It is submitted that the vessel be eligible to remain as classed with a fresh record of + N.E. 11-18, also record for tail shaft 11-18, and the boiler pressure recorded as 190 lbs per sq in.

The vessel was sufficiently out of the water to allow of tail shaft to be drawn.

Tail shaft was examined, and found in order. Stern bush was re-worked.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ 250.00 : : Nov 13 1918
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ 4.50 : : 19

Wm. Tunham

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York DEC - 3 1918

TUE. 18 FEB. 1919

Assigned + N.E. 11.18

7.5.11.18

note H. H. G.



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