

REPORT ON MACHINERY.

No. 2602

REC'D NEW YORK

Received at London Office

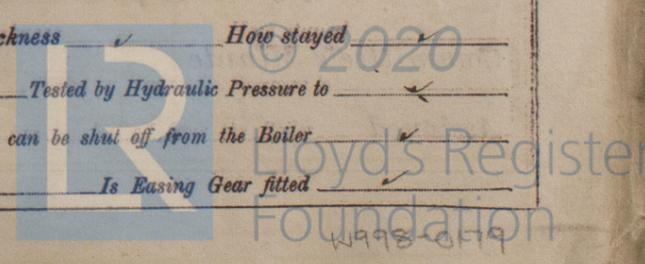
Date of writing Report 26th June 1917 When handed in at Local Office 26th June 1917 Port of Philadelphia, Pa
 No. in Survey held at Camden Date, First Survey 18th Oct 1915 Last Survey 18th June 1917
 Reg. Book. on the S.S. "Edward L. Doherty Junior" (Number of Vents 93)
 Master Built at Camden By whom built New York P. B. Corp (12 190) Tons Gross Net
 Engines made at Camden By whom made New York P. B. Corp when made 1917
 Boilers made at Do By whom made Do when made 1917
 Registered Horse Power Owners Petroleum Transport Co Port belonging to Los Angeles
 Nom. Horse Power as per Section 28 568 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 24", 35", 51", 75" Length of Stroke 51" Revs. per minute 80 Dia. of Screw shaft as per rule 15.6 Material of Steel
 as fitted 15.78" screw shaft
 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 Yes 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 Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5' 4"
 Dia. of Tunnel shaft as per rule 13.48 Dia. of Crank shaft journals as per rule 14.15 Dia. of Crank pin 15" Size of Crank webs 10 1/2" Dia. of thrust shaft under
 collars 14 3/4" Dia. of screw 19-6" Pitch of Screw 14-6" No. of Blades 4 State whether moveable Yes Total surface 113.5 sq ft
 No. of Feed pumps 2 Diameter of ditto 12x8" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 8 Sizes of Pumps see other side No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 6-3 1/2" x 1-3 1/2" In Holds, &c. 2-3 1/2" x 3-2" In Hold: 1-2" 2nd pump Room
 after Pump Room 1-2" x 1-6" 2-4" to port & after copper tanks 2-3 1/2" in oil fuel tank (when not used for oil fuel)
 No. of Bilge Injections 1 sizes 11" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes - 3 1/2"
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both
 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 both
 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 none How are they protected Yes
 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 none Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record (+)) Manufacturers of Steel Lukens Iron & Steel Co
 Total Heating Surface of Boilers 7804 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 single Ended
 Working Pressure 220 lbs Tested by hydraulic pressure to 330 lbs Date of test 14-4-16 No. of Certificate 92
 Can each boiler be worked separately Yes Area of fire grate in each boiler 59 sq ft No. and Description of Safety Valves to
 each boiler double opening loaded Area of each valve 8.29 sq in Pressure to which they are adjusted 220 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 4-6" side Mean dia. of boilers 14.8" Length 11.6" Material of shell plates steel
 Thickness 1 1/16" Range of tensile strength 28/32 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. Riv.
 long. seams T. R. D. B.S. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 3/16" Lap of plates or width of butt straps 2 3/4"
 Per centages of strength of longitudinal joint 57.9% Working pressure of shell by rules 240 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 3 1/2" x 3 1/2" x 1 1/16" No. and Description of Furnaces in each boiler 3 corrugated Material steel Outside diameter 3' 11 5/16"
 Length of plain part top 21" Thickness of plates bottom 3 1/2" Description of longitudinal joint weld No. of strengthening rings Yes
 Working pressure of furnace by the rules 226 Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1"
 Pitch of stays to ditto: Sides 7" x 7 1/4" Back 7" x 7" Top 7 3/8" x 7 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 252
 Material of stays iron Area at smallest part 1.99 sq in Area supported by each stay 53.4 sq in Working pressure by rules 280 End plates in steam space:
 Material steel Thickness 1 3/16" Pitch of stays 16 1/2" x 15 1/2" How are stays secured D. N. & nuts Working pressure by rules 246 Material of stays steel
 Area at smallest part 6.49 sq in Area supported by each stay 255.75 sq in Working pressure by rules 263 Material of Front plates at bottom steel
 Thickness 1 1/16" Material of Lower back plate steel Thickness 1 3/32" Greatest pitch of stays 14 1/4" x 7" Working pressure of plate by rules 220
 Diameter of tubes 2 1/2" Pitch of tubes 3 5/8" x 3 1/2" Material of tube plates steel Thickness: Front 1 1/16" Back 13/16" Mean pitch of stays 8 7/8"
 Pitch across wide water spaces 12 3/4" Working pressures by rules 248 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9" x 2 @ 1" Length as per rule 2.11 Distance apart 7 1/4" x 7 3/8" Number and pitch of stays in each 4 @ 7 3/8"
 Working pressure by rules 268 Steam dome: description of joint to shell Yes % of strength of joint Yes
 Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

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

In a Report also sent on the Hull of the Ship



IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied: - 2 connecting rod top end bolts & nuts; 2 connecting rod bottom end bolts & nuts; 2 main bearing bolts; 1 set of coupling bolts; 1 set of feed & bilge pump valves; a quantity of assorted bolts & nuts; iron of various sizes; 36 boiler tubes; 27 Condenser tubes; 1 set of air pump valves; 1 set of boiler check valves; 1 eccentric strap; 1 set of packing rings for all pistons ✓

The foregoing is a correct description,

New York Shipbuilding Corporation Manufacturer.

Dates of Survey while building: During progress of work in shops - 1915 Oct 18, 29, Nov 3, 9, 16, 23, Dec 2, 7, 9, 14, 17, 22, 29, Jan 4, 11, 14, 21, 28, 28 up to Jan 26, 1917; During erection on board vessel - Feb 3, 7, 12, 24, Mar 6, 12, 20, 27, 30, Apr 2, 12, 19, 24, 27, May 7, 16, 18, 25, 31, June 7, 13, 18; Total No. of visits 93

Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " " ✓

Dates of Examination of principal parts - Cylinders 17.8.16 Slides 18.1.17 Covers 10.11.16 Pistons 12.12.16 Rods 12.12.16
Connecting rods 24.10.16 Crank shaft 1.9.16 Thrust shaft 18.1.17 Tunnel shafts ✓ Screw shaft 18.1.17 Propeller 24.2.17
Stern tube 7.2.17 Steam pipes tested 18.12.16 Engine and boiler seatings 7.2.17 Engines holding down bolts 12.3.17
Completion of pumping arrangements 31.5.17 Boilers fixed 12.2.17 Engines tried under steam 27.4.17
Completion of fitting sea connections 24.4.17 Stern tube 24.4.17 Screw shaft and propeller 24.4.17
Main boiler safety valves adjusted 29.4.17 Thickness of adjusting washers Lock nuts fitted
Material of Crank shaft Steel Identification Mark on Do. 170 Material of Thrust shaft steel Identification Mark on Do. 170
Material of Tunnel shafts none Identification Marks on Do. - Material of Screw shafts steel Identification Marks on Do. 170
Material of Steam Pipes steel ✓ Test pressure 660 lbs per sq. ✓
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 ✓
Is this machinery duplicate of a previous case yes ✓ If so, state name of vessel "Standard Arrow" {Engines & boilers

General Remarks (State quality of workmanship, opinions as to class, &c. Donkey engines: - 7 1/2" x 5" x 10"; 16" x 10" x 14")
12" x 14" x 14" x 12"; 7 1/2" x 6" x 10"; 3 @ 6" x 4" x 6"; 10" x 10" x 12"

The machinery of this vessel has been built under special survey; the material and workmanship being good, and proved satisfactory on steam trial.

It is submitted that this vessel be eligible for a record of + L.M.C. 6.17 in the Register Book, also a notation "Fitted for Oil Fuel, flash point above 150°F."

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 6.17. F.D. Fitted for oil fuel 6.17. F.P. above 150°F.

The amount of Entry Fee ... \$ 15.00 :
Special ... \$ 242.00 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) \$ 10.00 :
When applied for, 16/7 1917
When received, 21.9.1917

A. T. Thomas
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 267 New York JUL 24 1917

Assigned + L.M.C. 6.17 Fitted for oil fuel 6.17 F.P. above 150°F. Elec Light

Write "Aunting or Shalter Dock" "Silver Strake" opposite the corresponding letter.

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