

REPORT ON MACHINERY.

No. 11152.
MON. FEB. 13 1922

Received at London Office

Date of writing Report 10th Feb 1922. When handed in at Local Office 11th Feb 1922 Port of Southampton.

No. in Survey held at Southampton Date, First Survey 5th May 1920 Last Survey Jan 19th 1922
Reg. Book. 36467 on the SS "BELLASCO." No. 994. (Number of Visits 63.)

Master Built at Southampton By whom built J. L. Thornycroft & Co. Ltd. No. 994. Tons Gross Net. When built

Engines made at Southampton By whom made J. L. Thornycroft & Co. Ltd. No. 994. when made 1922.

Boilers made at Greenock By whom made John Keicoid & Co. Ltd. when made 1921

Registered Horse Power Owners Dover Shg Co. (J. Bull & Co.) Port belonging to SWL.

Nom. Horse Power as per Section 28 240 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

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

Dia. of Cylinders 21" 34" 57" Length of Stroke 36. Revs. per minute 81 Dia. of Screw shaft as per rule 11" 11.84" Material of screw shaft S.

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 4'-0"

Dia. of Tunnel shaft as per rule 10 1/2" Dia. of Crank shaft journals as per rule 10 3/4" Dia. of Crank pin 1 1/2" Size of Crank webs 21 3/4 x 6 3/4" Dia. of thrust shaft under collars 11" Dia. of screw 15" Pitch of Screw 13'-11" No. of Blades 4. State whether moveable No. Total surface 71 sq ft

No. of Feed pumps 2. Diameter of ditto 3" Stroke 21" Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2. Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines one Ballast one General Service one Aux. feed. No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3-3" 2-3 in Stalk hold. 1-2 1/2" Tunnel well. 2-3" No 3 Hold 1-3 1/2 aft. Hold well. In Holds, &c. 2-3" No 1 Hold 2-3" No 2 Hold.

No. of Bilge Injections one sizes 6" Connected to condenser, or to circulating pump pump 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 below.

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 Yes Is it fitted with a watertight door Yes worked from BR floor & Engine casing.

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

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

Working Pressure Tested by hydraulic pressure to Date of test 17/4/20. 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 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

W369-0061

Lloyd's Register Foundation

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two Connecting Rod Top end bolts & nuts
Two Connecting Rod Bottom end bolts & nuts, Two Main Bearing Bolts
Six Coupling bolts, one set feed pump valves. One set bilge pump valves.
One set piston Springs. Two main feed check valves. Two Auxiliary feed
check valves. Two Safety valve springs assorted bolts & nuts Six Condenser
tubes & blank Condenser ferrules. Fifty tube packings Twenty boiler tubes
Two feed pump escape valve springs, One propeller one tail shaft, 12
Boiler gauge glasses, Iron of various sizes, two junk ring studs.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops --	7-17	3-11-21	12-24	18-23-20	9-16-20	13	1-9-16-24-30	9-14-22	3-11-20-25	10-17-23	4-14-19
		5-20	8-20	7-20	8-20	9-20	10-20	11-20	12-20	1-21	2-21	3-21
		9-23-25	14-16-27-30	34-8-10-22-24-26	17-9-17-28-29	11-21	14-15-22-23-30	13-14-17-19				
	During erection on board vessel --	8-21	9-21	10-21	11-21	12-21	1-22					
	Total No. of visits	63										

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders ^{23.8.21.} 25.8.21. Slides 7.11.22. Covers 7.11.22. Pistons 7.11.22. Rods 9.11.22
Connecting rods 9.11.22. Crank shaft 16.9.21. Thrust shaft 16.9.21. Tunnel shafts 16.9.21. Screw shaft 30.9.21. Propeller 30.9.21
Stern tube 30.9.21. Steam pipes tested 8.10.21. Engine and boiler seatings 3.10.21. Engines holding down bolts 14.12.22
Completion of pumping arrangements 19.1.22. Boilers fixed 14.12.22. Engines tried under steam 13.1.22.
Completion of fitting sea connections 3.10.21. Stern tube 3.10.21. Screw shaft and propeller 3.10.21.
Main boiler safety valves adjusted 29.11.22. Thickness of adjusting washers PBF $\frac{9}{32}$ " A $\frac{15}{32}$ " SBF $\frac{7}{16}$ " A $\frac{3}{8}$ "
Material of Crank shaft S. Identification Mark on Do. 4319 Material of Thrust shaft S. Identification Mark on Do. 4178.
Material of Tunnel shafts S. Identification Marks on Do. 4322 Material of Screw shafts S. Identification Marks on Do. 4318.
Material of Steam Pipes Copper cold drawn 4323 4324 Test pressure 360 lbs. hyd. press.

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 "Elizabeth Stoner"

General Remarks (State quality of workmanship, opinions as to class, &c. The engines, boilers and oil fuel installation have been constructed in accordance with the Rules and approved plans. The materials and workmanship are sound & good (except the L.P. cylinder) The Boilers tested by hydraulic pressure and with the engines secured on board and tested under full working conditions and respectfully submitted as being eligible in my opinion to be classed with the notation of +Lmc(2.22) in the Register book.

The vessel has at present been converted to coal fuel. L.P. cylinder :- In consequence of the slight porosity on the Port hand side of the L.P. cylinder, it has been recommended and agreed by the owners representative that this cylinder be again examined in six months from date.

The amount of Entry Fee ...	£ 4 : 0	When applied for,	11/2 / 1922
Special ...	£ 60 : 0	When received,	3.3.22
Donkey Boiler Fee ...	£ 11 : 5		
Travelling Expenses (if any)	£ 48 : 15		

J.G. Mackillop
Engineer Surveyor to Lloyd's Register of Shipping.
FRI. AUG. 11 1922

Committee's Minute
Assigned + L.P. 1.22. C.L. } subject.
Fitted for oil fuel 1.22. F.P. above 150°F. }
no limits

Certificate (if required) to be sent to the Surveyors are requested to write on or below the space for Committee's Minute.

