

t. 4.

REPORT ON MACHINERY.

No. 15876.

Received at London Office

MON. DEC. 13 1920

of writing Report 3rd Dec 1920 When handed in at Local Office 3rd Dec 10 20 Port of Leith
 in Survey held at Leith Date, First Survey 29th Sept, 1919 Last Survey 2nd Dec 1920
 7. Book. Mr Ardenza (Number of Visits 33)
 on the Leith Tons { Gross
 ster Built at Leith By whom built Hawthornes & Co. When built 1920
 ines made at Leith By whom made Hawthornes & Co. (No 180) when made 1920
 ilers made at do. By whom made do. (do.) when made 1920
 gistered Horse Power Owners Mrs. C. Steven & Co. Port belonging to
 m. Horse Power as per Section 28 169 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

GINES, &c.—Description of Engines

Triple Inverted

No. of Cylinders

No. of Cranks

1. of Cylinders 17-28-46 Length of Stroke 33 Revs. per minute 100 Dia. of Screw shaft 10-21 as per rule 10-3 Material of I
 as fitted 10-3/4 screw shaft

the screw shaft fitted with a continuous liner the whole length of the stern tube no liner Is the after end of the liner made water tight

the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part

ween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

ers are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 43"

2. of Tunnel shaft 8-538 8-67 as per rule 8-96 9-1 Dia. of Crank shaft journals 9-1/4 as fitted 9-1/4 Dia. of Crank pin 9-1/4 Size of Crank webs 17x6 1/2 Dia. of thrust shaft under

ars 9-1/4 Dia. of screw 12-0 Pitch of Screw 13-0 No. of Blades 4 State whether moveable no Total surface 45-0

of Feed pumps 2 Diameter of ditto 3 Stroke 16 1/2 Can one be overhauled while the other is at work yes ✓

of Bilge pumps 2 Diameter of ditto 3 Stroke 16 1/2 Can one be overhauled while the other is at work yes ✓

of Donkey Engines 2 Sizes of Pumps 8x9x8 6x4 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2-2" engine bilge : 1-2 1/4 92-2" In Holds, &c. 2 each 2" from fore to after holds. 1 1/2 tunnel well

in Blk Room space : 1-2 1/4 Special.

of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size yes. 2 1/4 ✓

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 no

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

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 ✓

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 ✓

at pipes are carried through the bunkers none ✓ How are they protected ✓

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

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

the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck. ✓

PLERS, &c.—(Letter for record S ✓) Manufacturers of Steel Beardmore & Co.

al Heating Surface of Boilers 31380 Is Forced Draft fitted no ✓ No. and Description of Boilers 2 SE. return tube

orking Pressure 180 lb. Tested by hydraulic pressure to 360 lb. Date of test 28-6-20 No. of Certificate 769

each boiler be worked separately yes ✓ Area of fire grate in each boiler 47.50 No. and Description of Safety Valves to

boiler two-direct spring Area of each valve 4.90 Pressure to which they are adjusted 185 lb. Are they fitted with easing gear yes ✓

allest distance between boilers or uptakes and bunkers or woodwork no side 3rd Mean dia. of boilers 13-0 Length 10-6 Material of shell plates S

kness 1 3/32 Range of tensile strength 28/32 ✓ Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

seams Tr. butt Diameter of rivet holes in long. seams 1 3/16 ✓ Pitch of rivets 8 1/4 Lap of plates or width of butt straps 17 7/8

centages of strength of longitudinal joint 91% Working pressure of shell by rules 187 Size of manhole in shell 12x16

of compensating ring no ✓ No. and Description of Furnaces in each boiler 3 horizontal ✓ Material S ✓ Outside diameter 42 1/16

th of plain part top ✓ Thickness of plates crown 3 1/32 ✓ Description of longitudinal joint welded ✓ No. of strengthening rings none

orking pressure of furnace by the rules 193 Combustion chamber plates: Material S ✓ Thickness: Sides 2 1/32 ✓ Back 2 1/32 ✓ Top 2 1/32 ✓ Bottom 7/8 ✓

h of stays to ditto: Sides 8 1/2 x 8 1/2 ✓ Back 8 1/2 x 8 1/2 ✓ Top 8 1/2 x 9 1/4 ✓ stays are fitted with nuts or riveted heads nuts ✓ Working pressure by rules 180

erial of stays S Area at smallest part 1.73 Area supported by each stay 72.50 Working pressure by rules 191 End plates in steam space:

erial S Thickness 1 3/16 ✓ Pitch of stays 19x16 1/2 ✓ How are stays secured friction 6 1/2 x 19 1/32 Working pressure by rules 212 Material of stays S

at smallest part 6.40 Area supported by each stay 3140 Working pressure by rules 212 Material of Front plates at bottom S

as 1 ✓ Material of Lower back plate S Thickness 1 ✓ mean pitch of stays (15) 1/4 ✓ Working pressure of plate by rules 190

eter of tubes 3 1/4 Pitch of tubes 4 3/8 Material of tube plates S Thickness: Front 1 ✓ Back 2 3/32 ✓ Mean pitch of stays 9.85

h across wide water spaces 14 1/4 ✓ Working pressures by rules 189 Girders to Chamber tops: Material S Depth and

ness of girder at centre 7 1/4 x 2 ✓ Length as per rule 31 ✓ Distance apart 8 1/2 ✓ Number and pitch of stays in each 2-9 3/4

orking pressure by rules 199 Steam dome: description of joint to shell ✓ % of strength of joint ✓

eter ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓

h of rivets ✓ Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed 2020

ERHEATER. Type none Date of Approval of Plan ✓ Tested by Hydraulic Pressure to ✓

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

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

002215-002221-0054

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two connecting rod top and bottom end bolts nuts, a set of coupling bolts, two main bearing bolts nuts, one set of air, circulating, feed and bilge pump valves; one main and auxiliary check valve; 6 junk pump bolts, one safety valve, one propeller, one top and bottom packing ring for H.P. piston valve; 1 set escape H.P. springs, and assorted bolts and nuts and iron of different sizes.

The foregoing is a correct description,

HAWTHORNE & CO., LIMITED

H. Luthyland

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1919 Sept. 29 Oct. 24-28 Nov. 6-13-27 Dec. 22 June 28-29 Feb. 21 March 2-20-31
1920 May 11-20 June 1-5-28 July 16-19 Aug. 30-31 Sept. 6-11-24 Oct. 12-19 Nov. 2-3 Dec. 2
33

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 31-3-20 Slides 28-6-20 Covers 28-6-20 Pistons 28-6-20 Rods 22-12-19
Connecting rods 22-12-19 Crank shaft 22-12-19 Thrust shaft 31-3-20 Tunnel shafts 31-3-20 Screw shaft 31-3-20 Propeller 28-6-20
Stern tube 28-6-20 Steam pipes tested 19-10-20 Engine and boiler seatings 16-7-20 Engines holding down bolts 2-11-20
Completion of pumping arrangements 3-11-20 Boilers fixed 11-9-20 Engines tried under steam 2-12-20
Completion of fitting sea connections 16-7-20 Stern tube 16-7-20 Screw shaft and propeller 16-7-20
Main boiler safety valves adjusted 3-11-20 Thickness of adjusting washers Port BL: F 5/16 A. 3/32 Plate BL F 5/16
Material of Crank shaft S Identification Mark on Do. LLOYD'S OM Material of Thrust shaft S Identification Mark on Do. LLOYD'S CM
Material of Tunnel shafts S Identification Marks on Do. LLOYD'S CM Material of Screw shafts I Identification Marks on Do. LLOYD'S CM
Material of Steam Pipes Solid drawn Copper. Test pressure 360 lb.
Is an installation fitted for burning oil fuel no. 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 no If so, state name of vessel ✓

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

This vessel's machinery has been built under special survey, and materials and workmanship are good.

It has been efficiently fitted on board the vessel, and in our opinion is eligible for record of + LMC 12-20. Elec. light.

The machinery was tried under steam & found satisfactory

It is submitted that this vessel is eligible for THE RECORD. + LMC 12-20

Recd 16/12/20
JTM

The amount of Entry Fee ... £ 2 : : : When applied for, 10-12-1920
Special ... £ 25 : 7 : :
Donkey Boiler Fee ... £ : : : When received, 4-1-21
Travelling Expenses (if any) £ : : : 6/6

Committee's Minute FRI. 17 DEC. 1920

Assigned

+ LMC 12-20

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



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Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.