

REPORT ON MACHINERY.

No. 27754

Received at London Office

SAT. 13 MAR. 1920

Writing Report 9-3-19 When handed in at Local Office 10-3-19 Port of Sunderland
 in Survey held at Sunderland Date, First Survey 20 June 19 Last Survey 10th March 1920
 Book. on the Machinery of the new Steel S.S. A F O N T O W Y (Number of Visits 3)

ter Built at Southampton By whom built Messrs. Tibbles, Ltd. Tons { Gross 684
 Net 336
 When built 1920

nes made at Sunderland By whom made Messrs. MacCall & Pollock, Ltd. (No. 291) when made 1920
 ers made at " By whom made " when made 1920

Registered Horse Power 102 Owners W. Boomb Port belonging to Harvelly

Horse Power as per Section 28 102 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

of Cylinders 14, 23, 39 Length of Stroke 27 Revs. per minute 105 Dia. of Screw shaft 7 1/2 as per rule 7 1/2 as fitted 8 1/2 Material of scrap iron

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

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

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

rs are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2'-10"

of Tunnel shaft as per rule 7 1/2 Dia. of Crank shaft journals as per rule 7 1/2 Dia. of Crank pin 7 1/2 Size of Crank webs 11 x 4 1/2 Dia. of thrust shaft under

ars 7 1/2 Dia. of screw 10-9 Pitch of Screw 10-3 No. of Blades 4 State whether moveable No Total surface 36.6 ft

of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work Yes

of Donkey Engines 2 Sizes of Pumps 4 1/2 x 3 x 6; 6 x 7 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4 @ 2" In Holds, &c. 2 @ 2" Forward

of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes; 3"

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 ✓

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 F. hold pipes How are they protected Scrub boards

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 None Is it fitted with a watertight door ✓ worked from Machinery aft

ILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons, Ltd., & John Brown & Co., Ltd.

tal Heating Surface of Boilers 1892 ft Is Forced Draft fitted No No. and Description of Boilers Two single ended Marine

orking Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 11-11-19 No. of Certificate 3627

n each boiler be worked separately Yes Area of fire grate in each boiler 30 ft No. and Description of Safety Valves to

h boiler Two: spring loaded Area of each valve 3.97 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

allest distance between boilers or uptakes and bunkers or woodwork 4'-0" Mean dia. of boilers 10'-5" Length 10'-3" Material of shell plates Steel

ickness 29 Range of tensile strength 28 3/4 to 32 3/4 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. laps

g. seams D.B.S., D.R. Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 5 1/2 Lap of plates or width of butt straps 11 1/4

r centages of strength of longitudinal joint rivets 82 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12

se of compensating ring 7 x 29 No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 37 1/2

ngth of plain part top 6-6 bottom 5-9 Thickness of plates crown 23 bottom 32 Description of longitudinal joint welded No. of strengthening rings

orking pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 1 1/16 Bottom 7/8

itch of stays to ditto: Sides 7 3/4 x 9 5/8 Back 8 3/4 x 8 3/8 Top 7 3/4 x 10 3/4 If stays are fitted with nuts or riveted heads nuts inside Working pressure by rules 182

aterial of stays Steel Area at smallest part 1.43 Area supported by each stay 83 Working pressure by rules 189 End plates in steam space:

aterial Steel Thickness 1 1/2 Pitch of stays 14 x 14 How are stays secured D.N. + W. Working pressure by rules 184 Material of stays Steel

rea at smallest part 3.26 Area supported by each stay 196 Working pressure by rules 183 Material of Front plates at bottom Steel

ickness 5/16 Material of Lower back plate Steel Thickness 7/8 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 233

diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates Steel Thickness: Front 1 1/2 Back 1 1/2 Mean pitch of stays 13 1/2 x 9

itch across wide water spaces 13 1/2 Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and

ickness of girder at centre 7 5/8 x 13 1/4 Length as per rule 26 3/4 Distance apart 10 3/4 Number and pitch of stays in each 2 @ 7 3/4

orking pressure by rules 183 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

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

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

ate 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

W1-0036

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— Two Connecting rod tops & bottom end Bolts & nuts, two main bearing bolts & nuts; one set of Coupling bolts & nuts, one set each of Feed & Bilge pump valves; a quantity of Bolts, nuts, & Pins of various sizes.

The foregoing is a correct description,

MACPOLL & POLLOCK, LTD.

J. R. Richardson

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	1919 Jan 20 Aug 1 13 18 22 Sep 8 22 Oct 1 7 14 20 Nov 3 11 19 Dec 5 18
	During erection on board vessel - - -	Jan 7 14 21 23 30 31 Feb 2 12 17 18 25 28 Mar 1 2 10
	Total No. of visits	31

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 9-9-19 Slides 3-11-19 Covers 17-2-20 Pistons 28-2-20 Rods 14-10-19 Connecting rods 14-10-19 Crank shaft 8-9-19 Thrust shaft 13-9-19 Tunnel shafts None Screw shaft 13-9-19 Propeller 28-2-20 Stern tube 22-9-20 Steam pipes tested 31-1-20 Engine and boiler seatings 23-1-20 Engines holding down bolts 2-2-20 Completion of pumping arrangements 1-3-20 Boilers fixed 23-1-20 Engines tried under steam 2-3-20 Completion of fitting sea connections 23-1-20 Stern tube 23-1-20 Screw shaft and propeller 1-3-20 Main boiler safety valves adjusted 18-2-20 Thickness of adjusting washers P. boiler p. 11/32, S 5/16; S boiler p. 5/16, S 5/16 Material of Crank shaft Inf. Steel Identification Mark on Do. N° 855 J.H.M. Material of Thrust shaft Inf. Steel Identification Mark on Do. N° 855 Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts Souphron Identification Marks on Do. N° 855 Material of Steam Pipes Copper ✓ Test pressure 360 lbs. " 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.)

The Workmanship & Materials are good.

The Machinery has been constructed under special survey and is eligible in our opinion for classification, and the record + L.M.C. 3, 20.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3, 20.

SUNDERLAND.

15/3/20

The amount of Entry Fee ... £	2 : 0 0	When applied for,
Special ... £	15 : 6 0	12 MAR 1920
Donkey Boiler Fee ... £	:	When received,
Travelling Expenses (if any) £	:	1/5/19 20 APR 19

Committee's Minute

Assigned

TUE 16 MAR 1920

+ L.M.C. 3, 20

CERTIFICATE WRITTEN

Ed. W. Rutter

Engineer Surveyor to Lloyd's Register of Shipping.



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