

REPORT ON MACHINERY

No. 12492

11 APR 1925

Received at London Office

20 NOV 1919

Date of writing Report 19 When handed in at Local Office

Port of Newcastle-on-Tyne

No. in Survey held at South Shields
Reg. Book. on theDate, First Survey 26 April 1918 Last Survey 19
(Number of Visits)

Master Built at Alton By whom built Fash Shipbuilding Co. Ltd.
Engines made at South Shields By whom made Geo. J. Grey & Co. Ltd. (Eng. No. 594) when made 1919
Boilers made at South Shields By whom made when made
Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 64 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Compound Inverted No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 17"-34" Length of Stroke 24" Revs. per minute Dia. of Screw shaft as per rule 7.6" Material of screw shaft Scrap iron
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 If the liner is in more than one length are the joints burned 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 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 7.5" Dia. of Crank shaft journals as per rule 7.5" Dia. of Crank pin 7 1/2" Size of Crank webs 11 1/2" Dia. of thrust shaft under
collars 7 1/2" Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface
No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 13" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 2 3/8" Stroke 13" Can one be overhauled while the other is at work Yes
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 1 sizes 2 3/4" Connected to condenser, or to circulating pump 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 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
plate
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

010246-010253-0272

If so, is a report now forwarded?

IS A DONKEY BOILER FITTED?
SPARE GEAR. State the articles supplied:— 2-Top End Bolts & Nuts; 2-Bottom End Bolts & Nuts; 2-main Bearing Bolts & Nuts;
Set Compelling Bolts & Nuts; Feed & Bilge Valves; air & circulating pumps' valves, Assorted bolts & nuts
One set of pistons, propeller, piston pin & ring bolts.

The foregoing is a correct description,
for GEO: T. GREY & CO., LTD.

14 Hunder Doeg

Manufacturers of Marine Engines

~~SECRETARY~~

1918 *Director*
Apr 26 May 15 23. 28. 31 Jun 3. 12. 14. 19. July 9. 19. Oct 14

Dates of Survey while building	{	During progress of	
		work in shops - -	
		During erection on	
		board vessel - - -	
		Total No. of visits	12

Is the approved plan of main boiler forwarded
" donkey " "

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 14.6.18 Slides 28.5.18 Covers 19.6.18 Pistons 15.5.18 Rods 19.7.18
Connecting rods 15.5.18 Crank shaft 19.6.18 Thrust shaft 3.6.18 Tunnel shafts Screw shaft 3.6.18 Propeller
Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts
Completion of pumping arrangements Boilers fixed Engines tried under steam
Completion of fitting sea connections Stern tube Screw shaft and propeller
Main boiler safety valves adjusted Thickness of adjusting washers
Material of Crank shaft S. M. Steel Identification Mark on Do. 4615 GAH Material of Thrust shaft S. M. Steel Identification Mark on Do. 4614 C. M.
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Scrap Iron Identification Marks on Do. 4615 C. M.
Material of Steam Pipes Test pressure
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 Enigma duplicate of 'Enigma'

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

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The machinery has been built under special survey. The materials & workmanship are sound and good.
The Engines have been forwarded to Alcoa to be installed in a vessel building by Messrs The Foster Shipbuilding Co. Ltd.
It is stated that the spare gear as mentioned above will be supplied with the Engines - to be checked and examined on board.

Certificate (if required) to be sent to _____

Proportion of fee to be created to Newcastle on completion

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

Committee's Minute
Assigned

WED. 15 APR 1925

See Rob. 141824

Leonard G Shallercross
Engineer, Surveyor to

Shallcross
Engineer Surveyor to Lloyd's Register of Shipping.

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Lloyd's Register
Foundation