

REPORT ON MACHINERY.

No. 34834

Received at London Office

MAY 23 1918

Date of writing Report

19

When handed in at Local Office

19

Port of

GLASGOW

Survey held at
Book.Date, First Survey 22nd Mar. 1914 Last Survey 17th May 1918

(Number of Vents 106)

on the S.S. YARAFRICAN

Built at Glasgow

By whom built Harland & Wolff (No 527) When built 1918

as made at Glasgow

By whom made

Do.

(No 526) when made 1918

made at Clydebank

By whom made John Brown & Co (No 507/1 C.H.)

when made 1918

rated Horse Power

Owners Shipping Controller (a week 6000 hrs) Port belonging to London

Horse Power as per Section 28 517

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

INES, & Co. — Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

of Cylinders 27-44-73

Length of Stroke 48

Revs. per minute 77

Dia. of Screw shaft

as per rule 15 1/2

Material of steel

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

e 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

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes

are fitted, is the shaft lapped or protected between the liners

Length of stern bush 5-0 1/2

of Tunnel shaft

as per rule 13 1/2

Dia. of Crank shaft journals

as per rule 14 1/2

Dia. of Crank pin 14 1/2

Size of Crank webs 28 x 9

rs 14 3/4

Dia. of screw 17-6

Pitch of Screw 16-6

No. of Blades 4

State whether moveable No

Total surface 102 ft

of Feed pumps 2

Diameter of ditto 4

Stroke 24

Can one be overhauled while the other is at work Yes

of Bilge pumps 2

Diameter of ditto 4

Stroke 24

Can one be overhauled while the other is at work Yes

of Donkey Engines 3

Sizes of Pumps

1 head 9 1/2 x 7 x 18, 1 General 9 1/2 x 7 x 18, 1 Ballast 10 1/2 x 14 x 24

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 200 of 3 1/2

In Holds, &c. No 1 200 of 3 Cross bunkers 200 of 3 1/2

ft hold 200 of 3

Lignel well one of 3 Tunnel forward end one of 3

of Bilge Injections 1 sizes 8

Connected to condenser, or to circulating pump of Pump

Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2

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

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 below

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 Bilge & oil Suctions

How are they protected Wood and Iron Casings

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

ates of examination of completion of fitting of Sea Connections 28.3.18

of Stern Tube 28.3.18

Screw shaft and Propeller 28.3.18

the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door No

worked from Entry by trunkway

ILERS, & Co. — (Letter for record 5)

Manufacturers of Steel

Do. Colvill & Son

See Separate Report

Total Heating Surface of Boilers 7668 ft

Is Forced Draft fitted Yes

No. and Description of Boilers 3 Single ended

Working Pressure 180 lb

Tested by hydraulic pressure to 360

Date of test 27.3.18

No. of Certificate 14108

14138

in each boiler be worked separately Yes

Area of fire grate in each boiler 63.3 ft

No. and Description of Safety Valves to

ch boiler Double spring loaded

Area of each valve 4.62 ft

Pressure to which they are adjusted 185 lb

Are they fitted with easing gear Yes

smallest distance between boilers or uptakes and bunkers or woodwork 1-9

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

ng. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

er centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

ize of compensating ring

No. and Description of Furnaces in each boiler 3 16 height

Material

Outside diameter

length of plain part

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

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

Diameter 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

Diameter 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

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

002194-002205-0210.1

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 2 top end 2 bottom end 2 main bearing and 6 coupling bolts & nuts, set of fuel and belp pump valves assembly from both ends and 1 propeller and other spares as required by specification

The foregoing is a correct description,

FOR HARLAND & WOLFE LTD.
J. E. Cobbe
GENERAL MANAGER
DIESEL ENGINE WORKS.

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1914 Mar 22 28 Apr 5 13 19 25 May 1 5 12 16 24 25 30 21 Jun 4 12 14 23 25 27 July 2 4 7 10 12 26 29
During erection on board vessel - 8 9 20 29 30 31 July 6 8 12 15 18 21 24 Oct 1 6 10 11 12 14 23 26 31 Nov 13 18 19 20 23 26 27 30 Dec 3 4 5 8 11 13 18 21 24 26 1915
Total No. of visits 106

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts - Cylinders 8 8 17 Slides 12 9 17 Covers 8 8 17 Pistons 8 8 17 Rods 25 6 17
Connecting rods 12 6 17 Crank shaft 26 5 18 Thrust shaft 8 8 17 Tunnel shafts 27 9 17 Screw shaft 26 3 18 Propeller 28 3 18
Stern tube 22 3 18 Steam pipes tested 9 4 18 JS. QDR Engine and boiler seatings 23 4 18 Engines holding down bolts 13 5 18
Completion of pumping arrangements 13 5 18 Boilers fixed 13 5 18 Engines tried under steam 13 5 18 17 5 18
Main boiler safety valves adjusted 13 5 18 Thickness of adjusting washers SB 1 P 7/16 S 3/8 center 13 P 7/16 S 5/16 P 5/8 S 5/16 P 5/8
Material of Crank shaft Steel Identification Mark on Do. 526 JE Material of Thrust shaft Steel Identification Mark on Do. 1099 JF
Material of Tunnel shafts Steel Identification Marks on Do. 1015 JP, 1016 JP Material of Screw shafts Steel Identification Marks on Do. 88, 3054 A
Material of Steam Pipes Steel Test pressure 540 lb

Is an installation fitted for burning oil fuel Yes (White system) 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 If so, state name of vessel Standard Vessel Class A CT

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under Special Survey in accordance with the Rules and approved Plans and has been seen working under steam satisfactorily, materials and workmanship are good.

The machinery is eligible in my opinion to be classed + LMC 5-18, and to have the record fitted for oil fuel 5-18 F.P. above 150° F.

It is submitted that this vessel is eligible for THE RECORD + LMC 5-18 F.P. Fitted for oil fuel 5-18 F.P. above 150° F.

The amount of Entry Fee £ : : When applied for, 25/5/18
Special £ 146 : 11 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : : When received, 4-7-18 12-9-18

Committee's Minute GLASGOW 28 MAY 1918

Assigned + LMC 5-18

Fitted for oil fuel 5-18 F.P. above 150° F.

MACHINERY CERTIFICATE
WRITTEN 29 5 18



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Committee's Minute
Assigned