

Rpt. 4.

REPORT ON MACHINERY

No. 30901

Date of writing Report 13-1-19 19

When handed in at Local Office 15-1-19 19

Received at London Office

FRI JAN 31 1919

No. in Survey held at

Reg. Book.

on the Hull

Date, First Survey 19/4/15

Port of Hull

Last Survey 13-1-19 19

(Number of Visits 100)

Master

Built at

Goole

By whom built

Goole & Bx Repg & Co Ltd

Tons

Gross 955

Net 495

When built 1919-1

Engines made at

Hull

By whom made

Barber & Co Ltd

when made 1919-1

Boilers made at

Hull

By whom made

Barber & Co Ltd

when made 1919-1

Registered Horse Power

Owners Pile & Co

Nom. Horse Power as per Section 28 113

Is Refrigerating Machinery fitted for cargo purposes

Port belonging to

ENGINES, &c.—Description of Engines

Triple expansion

Is Electric Light fitted

Dia. of Cylinders 15"-25"-40" Length of Stroke 30" Revs. per minute

No. of Cylinders Three No. of Cranks 3

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Dia. of Screw shaft as per rule 9.22 as fitted 9.22

Material of screw shaft steel

in the propeller boss If the liner is in more than one length are the joints burned

Is the after end of the liner made water tight

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

If the liner does not fit tightly at the part

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

If two

Dia. of Tunnel shaft as per rule 7.74 as fitted 7.74

Dia. of Crank shaft journals as per rule 8.127 as fitted 8.127

Length of stern bush 39"

collars 8 1/4" Dia. of screw 11'-0" Pitch of Screw 11'-6"

Dia. of Crank pin 8 1/4" Size of Crank webs 16 x 5 1/2" Dia. of thrust shaft under

No. of Feed pumps two Diameter of ditto 2 1/4" Stroke 18"

No. of Blades 4 State whether moveable no Total surface 42 sq ft

No. of Bilge pumps two Diameter of ditto 2 1/4" Stroke 18"

Can one be overhauled while the other is at work yes

No. of Donkey Engines two Sizes of Pumps 6, 4 x 6"

Can one be overhauled while the other is at work yes

In Engine Room one 2 1/2 in Engine Room

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

In Holds, &c. Two 2" dia

No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump yes

Is a separate Donkey Suction fitted in Engine room & size yes 2 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 none

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 above

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 Forward Suctions

How are they protected strong casings

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 none

Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

D. Colville & Sons

Total Heating Surface of Boilers 2000 sq ft

Is Forced Draft fitted no

No. and Description of Boilers Two single ended

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Date of test 21-9-17

No. of Certificate 3238

Can each boiler be worked separately yes

Area of fire grate in each boiler 31.25 sq ft

No. and Description of Safety Valves to

each boiler two spring loaded

Area of each valve 3 1/4"

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4 ft

Mean dia. of boilers 129"

Length 10'-3" Material of shell plates steel

Thickness 1 1/16"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams double

long. seams

Diameter of rivet holes in long. seams 1 3/16"

Pitch of rivets 6 3/8"

Lap of plates or width of butt straps 12 3/4"

Per centages of strength of longitudinal joint

rivets 82.7

plate 81.3

Working pressure of shell by rules 180

Size of manhole in shell 16" x 12"

Size of compensating ring 8 1/2" x 1 1/16"

No. and Description of Furnaces in each boiler Two plain

Material steel Outside diameter 39"

Length of plain part top 84 7/16"

bottom 77"

Thickness of plates crown 1 29/32"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 192

Combustion chamber plates: Material steel

Thickness: Sides 2 3/32"

Back 2 3/32"

Top 2 3/32"

Bottom 2 3/32"

Pitch of stays to ditto: Sides 10 1/2" x 6 3/4"

Back 10 3/4" x 6 3/4"

Top 10 3/4" x 6 3/4"

Bottom 10 3/4" x 6 3/4"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 186

Material of stays steel

Area at smallest part 2.07 sq ft

Area supported by each stay 94.3 sq ft

Working pressure by rules 197

End plates in steam space:

Material steel Thickness 1 1/16"

Pitch of stays 14 1/2" x 14"

How are stays secured 8, 7

Working pressure by rules 197

Material of stays steel

Area at smallest part 4.22 sq ft

Area supported by each stay 200 sq ft

Working pressure by rules 220

Material of Front plates at bottom steel

Thickness 1 1/16"

Material of Lower back plate steel

Thickness 1 1/16"

Greatest pitch of stays 14" x 6 1/2"

Working pressure of plate by rules 226

Diameter of tubes 3 1/4"

Pitch of tubes 4 7/8" x 4 1/2"

Material of tube plates steel

Thickness: Front 1 5/16"

Back 1 3/16"

Mean pitch of stays 9.12"

Pitch across wide water spaces 14 1/2"

Working pressures by rules 188

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8" x 1 3/8"

Length as per rule 26.6"

Distance apart 10 3/4"

Number and pitch of stays in each Two 8 3/4"

Working pressure by rules 184

Steam dome: description of joint to shell

Diameter

Thickness of shell plates

Material

% of strength of joint

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

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

Pressure to which each is adjusted

Is Easing Gear fitted

Date of Test

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

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002477-002484-0172

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air, feed & belp circulating pump valves, six fast ring studs & nuts, 3 cross-hair tubes & a quantity of firebricks & packing, one set of donkey pump valves, one main & one donkey check valve, one safety valve spring, one propeller & boiler tubes & a quantity of bolts & nuts & washers of various sizes.

The foregoing is a correct description,

FOR EARLE'S SHIPBUILDING & ENGINEERING CO. LTD.

Manufacturer.

Dates of Survey while building

(During progress of work in shops --)
(During erection on board vessel --)
Total No. of visits

1915:—Apr 19th to Jan 13th 1919

100.

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 5-11-17 Slides 29-10-18 Covers 5-11-17 Pistons 5-11-17 Rods 21-11-17
Connecting rods 30-5-17 Crank shaft 19-10-17 Thrust shaft 30-9-18 Tunnel shafts ✓ Screw shaft 11-9-18 Propeller 11-9-18
Stern tube 6-9-18 Steam pipes tested 18-11-18 Engine and boiler seatings 1-11-18 Engines holding down bolts 14-11-18
Completion of pumping arrangements 13-1-19 Boilers fixed 25-11-18 Engines tried under steam 13-1-19
Completion of fitting sea connections 23-9-18 Stern tube 23-9-18 Screw shaft and propeller 1-11-18
Main boiler safety valves adjusted 25-11-18 Thickness of adjusting washers Port- $P\frac{11}{32}$, $S\frac{3}{4}$ " Starboard $P\frac{11}{32}$, $S\frac{3}{4}$ "
Material of Crank shaft Steel Identification Mark on Do. 2047 FLS Material of Thrust shaft Steel Identification Mark on Do. 2167 FLS
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts steel Identification Marks on Do. 2159 FLS
Material of Steam Pipes solid drawn copper Test pressure 320 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 machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society, the materials & workmanship are good. The boiler & steam pipes have been tested as above & found sound & tight. The machinery has been properly fitted & secured on board the vessel & on completion tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 192 lbs.

In my opinion the vessel is eligible for the award + L.M.C. 1-19.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 1-19.

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 16 : 19 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 6/4 :

When applied for.

22/1/19

When received.

26.2.19

RBN 27.2.19.

Frank A. Stanger

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 4 FEB 1919

Assigned

L.M.C. 1-19

MACHINERY CERTIFICATE WRITTEN



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