

REPORT ON MACHINERY.

No. 30174

Received at London Office

FRI. - 5 OCT 1917

Date of writing Report 1-10-17 19 When handed in at Local Office

3/10/17 Port of Hull

No. in Survey held at

Hull

Date, First Survey Jun 11/15

Last Survey 1-10-17 19

Reg. Book.

513 on the steel screw steamer "Domino"

(Number of Visits 93)

Gross 1193

Net 536

Master

Built at

Dundee

By whom built

Dundee & B. Co. Ltd

When built 191-7

Engines made at

Hull

By whom made

Barclay & Co. Ltd

when made 1917-10

Boilers made at

Hull

By whom made

Barclay & Co. Ltd

when made 1917-10

Registered Horse Power

Owners

Pierman's Wilson Line Ltd

Port belonging to Hull

Nom. Horse Power as per Section 28 249

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders Three

No. of Cranks 3

Dia. of Cylinders 21"-35"-57"

Length of Stroke 36" Revs. per minute

Dia. of Screw shaft as per rule 11.91

Material of screw shaft Steel

Is 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

in the 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

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 51"

Dia. of Tunnel shaft as per rule 10.268

Dia. of Crank shaft journals as per rule 10.8

Dia. of Crank pin 11 1/2"

Size of Crank webs 7 1/2" x 1 1/2"

Dia. of thrust shaft under

collars 1 1/2"

Dia. of screw 13-6

Pitch of Screw 15-0"

No. of Blades 4

State whether moveable No

Total surface 58 1/2"

No. of Feed pumps two

Diameter of ditto 3"

Stroke 18"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps two

Diameter of ditto 3"

Stroke 18"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines two duplex

Sizes of Pumps 6 1/2" x 6 1/2" x 6 1/2"

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

In Engine Room Three 2 1/2" dia in one 2" in tunnel well

In Holds, &c. Two 2" dia in each hold

No. of Bilge Injections one sizes 5 1/2" Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size 4 x 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 No

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 suction

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 Yes

Is it fitted with a watertight door Yes

worked from top platform

OILERS, &c.—(Letter for record S)

Manufacturers of Steel D. Colville & Sons

Total Heating Surface of Boilers 4360 1/2

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 5-4-17

No. of Certificate 3202

Can each boiler be worked separately Yes

Area of fire grate in each boiler 59 1/2

No. and Description of Safety Valves to

each boiler two spring loaded

Area of each valve 5 1/2

Pressure to which they are adjusted 185

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers 18"

Mean dia. of boilers 180"

Length 10'9"

Material of shell plates Steel

Thickness 1 1/32"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams double

long. seams 1 1/2"

Diameter of rivet holes in long. seams 1 1/4"

Pitch of rivets 8 3/8"

Top of plates or width of butt straps 18 1/2"

Per centages of strength of longitudinal joint rivets 89.4

plate 85

Working pressure of shell by rules 182

Size of manhole in shell 16" x 12"

Size of compensating ring 9" x 1 1/32"

No. and Description of Furnaces in each boiler Three plain

Material Steel

Outside diameter 44 1/16"

Length of plain part top 8 1/2"

Thickness of plates crown 3 1/2"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 189

Combustion chamber plates: Material Steel

Thickness: Sides 2 3/32"

Back 1 1/16"

Top 7/8"

Bottom 2 3/32"

Pitch of stays to ditto: Sides 9 1/2" x 8"

Back 9" x 9"

Top 8 1/2" x 7 1/2"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 202

Material of stays Steel

Area at smallest part 1.76

Area supported by each stay 76

Working pressure by rules 185

End plates in steam space:

Material Steel

Thickness 1 3/16"

Pitch of stays 9 5/8" x 1 1/2"

How are stays secured D. N.

Working pressure by rules 183

Material of stays Steel

Area at smallest part 6.09

Area supported by each stay 343

Working pressure by rules 184

Material of Front plates at bottom Steel

Thickness 3/32"

Material of Lower back plate Steel

Thickness 7/8"

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

Working pressure of plate by rules 182

Diameter of tubes 3 1/4"

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

Material of tube plates Steel

Thickness: Front 3 1/32"

Back 7/8"

Mean pitch of stays 11.4"

Pitch across wide water spaces 13 3/4"

Working pressures by rules 190

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 8 3/4" x 1 1/2"

Length as per rule 31.6

Distance apart 8 1/2"

Number and pitch of stays in each Three 7 1/2"

Working pressure by rules 189

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

Diam. of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

W705-0034

Lloyd's Register Foundation

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, circulating feed oblige pump valves, 6 junk ring studs & nuts, one main & one donkey chest valve, one safety valve spring, one propeller, 3 condenser & boiler tubes & a quantity of bolts & nuts & nuts of various sizes

The foregoing is a correct description,

SHIPBUILDING & ENGINEERING CO. LIMITED

Attyacks

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1915: Jun 11 Dec 3.5.8. 1916: July 25, 27. Aug 4.14, 24, 28, 31. Sept 4.6. Oct. 4.13, 24, 27, 30. Nov 6.15, 20, 23. During erection on board vessel - - 30 Dec 4.12, 18, 22, 28, 1917: Jan 2.5, 17, 19, 22, 24, 26, 29, 31. Feb 2.5, 8, 10, 12, 14, 16, 18, 20, 27, 28, Mar 5.4, 19, 21, 30, Apr 3.5, 10, 17, 29, 24, 25, 27, 30, May 7.9, 14, 24, 30, Jun 7.12, 15, 25, Jul 4.5, 17, 25, Aug 4.17, 24, 28, 30, 31, Sep 3.5, 6, 10, 12, 13, 14, 26, 28, Oct 1. Total No. of visits 93

Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders 30-4-17 Slides 4-7-17 Covers 30-4-17 Pistons 7-5-17 Rods 7-5-17 Connecting rods 3-4-17 Crank shaft 23-4-17 Thrust shaft 7-5-17 Tunnel shafts 7-5-17 Screw shaft 4-7-17 Propeller 4-7-17 Stern tube 25-4-17 Steam pipes tested 17-8-17 Engine and boiler seatings 16-8-17 Engines holding down bolts 5-9-17 Completion of pumping arrangements 14-9-17 Boilers fixed 10-9-17 Engines tried under steam 14-9-17 Completion of fitting sea connections 21-4-17 Stern tube 16-8-17 Screw shaft and propeller 17-8-17 Main boiler safety valves adjusted 12-9-17 Thickness of adjusting washers Pri-P 7/16 S 7/16 Lt P 7/16 S 7/32 Material of Crank shaft steel Identification Mark on Do. H108 GAH Material of Thrust shaft steel Identification Mark on Do. 1778 FLS Material of Tunnel shafts steel Identification Marks on Do. 1779 FLS Material of Screw shafts steel Identification Marks on Do. 4378 GAH Material of Steam Pipes lapwelded iron Test pressure 540 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 boilers & steam pipes have been tested as above by hydraulic pressure & found sound & tight, the machinery has been properly fitted & secured on board the vessel & on completion tested under full power & found to work satisfactorily. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 191 lbs. In my opinion the vessel is eligible for the record + L.M.C. 10-17

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10.17.

The amount of Entry Fee ... £ 2 : 0 : When applied for, Special ... £ 32 : 9 : 4-10-17 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : 4/6 : 24.10.17

Frank A. Stanger Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE OCT-9-1917 Assigned + L.M.C. 10.17

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