

REPORT ON MACHINERY.

No. 30174

50 OCT 1917

Received at London Office

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)

Master Built at Dundee By whom built Dundee S.B. Co. Ltd Tons Gross 1193 Net 536
When built 1917

Engines made at Hull By whom made Barlow's Co. Ltd when made 1917-10

Boilers made at Hull By whom made Barlow's Co. Ltd when made 1917-10

Registered Horse Power Owners Ellerman'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 Is the after end of the screw shaft made water tight in the propeller boss yes

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

If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 51"

Dia. of Tunnel shaft as per rule 10.288" as fitted 10.2" Dia. of Crank shaft journals as per rule 10.8" as fitted 11.8" Dia. of Crank pin 11.2" 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" 7 1/2" x 8 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 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 casing

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 380 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 5.8" Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers on woodwork 18" Horizontal 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 L.P.D.B. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18 1/2"

Per centages of strength of longitudinal joint rivets 89.4 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" bottom 7 7/8" Thickness of plates crown 3 1/32 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 10 5/8" x 1 1/2" How are stays secured D.T. 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 8 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
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W705-0034



IS A DONKEY BOILER FITTED? No

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 & bilge 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.

Assistant Manager
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, 19, 20, 27, 28, Mar 5, 14, 19, 21, 30, Apr 3, 5, 10, 17, 29, 24, 25, 27, 30, May 7, 9, 10, 14, 24, 30, Jun 7, 12, 15, 25, Jul 4, 5, 17, 25, Aug 4, 7, 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? Yes

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 7-8-17 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 boiler & 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.

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

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

Committee's Minute TUE OCT - 9 1917.

Assigned + L.M.C. 10.17



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