

Rpt. 4.

REPORT ON MACHINERY.

No. 32752

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Date of writing Report 17/5/21 19 When handed in at Local Office 17/5/21 19 Port of Hull
No. in Survey held at Hull Date, First Survey 14/3/21 Last Survey 3/5/21 19
Reg. Book. 7355 on the S.S. FLAMBOROUGH in MURWIK (Number of Visits)
Master Built at Flensburg By whom built Flensburger Schiffbau Ges. When built 1914
Engines made at Flensburg By whom made Flensburger Schiffbau Ges. when made 1914
Boilers made at Flensburg By whom made Flensburger Schiffbau Ges. when made 1914
Registered Horse Power Owners Hull Steam Tuging & Ice Co. Ltd. Port belonging to Hull
Nom. Horse Power as per Section 28 83 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders $12\frac{5}{8} \times 20\frac{1}{2} \times 33\frac{1}{2}$ Length of Stroke $23\frac{1}{2}$ Revs. per minute 107 Dia. of Screw shaft as per rule $4\frac{1}{2}$ Material of screw shaft as fitted $4\frac{1}{2}$
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 ☒ 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 $31\frac{1}{2}$
Dia. of Tunnel shaft as per rule $6\frac{3}{4}$ Dia. of Crank shaft journals as per rule $6\frac{3}{4}$ Dia. of Crank pin $4\frac{1}{2}$ Size of Crank webs $3\frac{5}{8} \times 4\frac{1}{2}$ Dia. of thrust shaft under collars $6\frac{13}{16}$ Dia. of screw $9\frac{1}{4}$ Pitch of Screw $10\frac{1}{2}$ No. of Blades 4 State whether moveable No Total surface $34\frac{1}{2}$
No. of Feed pumps One Diameter of ditto $2\frac{1}{2}$ Stroke 12 Can one be overhauled while the other is at work ☒
No. of Bilge pumps One Diameter of ditto $2\frac{3}{4}$ Stroke 12 Can one be overhauled while the other is at work ☒
No. of Donkey Engines One Sizes of Pumps $4 \times 6 \times 4$ No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room One 2×4 One steam ejector $2\frac{1}{2}$ In Holds, &c. 1- 2×4 1- $2\frac{1}{2}$ Fuel Room, 1- 2×4
No. of Bilge Injections One sizes $3\frac{1}{2}$ Connected to condenser, or to circulating pump C.R.P. Is a separate Donkey Suction fitted in Engine room & size Yes 2×4
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 Yes
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & cocks
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 Main steam & waste How are they protected Shut in 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 ☒ Is it fitted with a watertight door ☒ worked from ☒

BOILERS, &c.—(Letter for record ☒) Manufacturers of Steel
Total Heating Surface of Boilers $1559\frac{1}{2}$ Is Forced Draft fitted No No. and Description of Boilers One single ended Multitubular
Working Pressure 200 lb Tested by hydraulic pressure to 400 lb Date of test 12/4/21 No. of Certificate ☒
Can each boiler be worked separately ☒ Area of fire grate in each boiler $36\frac{1}{2}$ No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve $4\frac{1}{2}$ Pressure to which they are adjusted 200 lb Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean dia. of boilers $12\frac{1}{2}$ Length $10\frac{1}{2}$ Material of shell plates ☒
Thickness $1\frac{1}{2}$ Range of tensile strength ☒ Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double long. seams Q.R.O.B.S. Diameter of rivet holes in long. seams ☒ Pitch of rivets ☒ Lap of plates or width of butt straps $26\frac{1}{2}$
Per centages of strength of longitudinal joint rivets plate 85% Working pressure of shell by rules ☒ Size of manhole in shell 16×12
Size of compensating ring $4 \times 1\frac{1}{2}$ No. and Description of Furnaces in each boiler Two Cornucopia Material ☒ Outside diameter $3\frac{1}{2}$
Length of plain part top $6\frac{1}{2}$ bottom $6\frac{1}{2}$ Thickness of plates crown $2\frac{1}{2}$ bottom $2\frac{1}{2}$ Description of longitudinal joint welded No. of strengthening rings 3
Working pressure of furnace by the rules ☒ Combustion chamber plates: Material ☒ Thickness: Sides $2\frac{1}{2}$ Back $2\frac{1}{2}$ Top $2\frac{1}{2}$ Bottom $1\frac{3}{4}$
Pitch of stays to ditto: Sides $8\frac{1}{2} \times 4\frac{1}{2}$ Back $4\frac{1}{2} \times 4\frac{1}{2}$ Top $8\frac{1}{2} \times 8\frac{1}{2}$ If stays are fitted with nuts or riveted heads Nut & Wash 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 $1\frac{1}{4}$ Pitch of stays $4\frac{1}{2} \times 15$ How are stays secured D.N. W. 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 $1\frac{1}{4}$ Material of Lower back plate ☒ Thickness $1\frac{1}{4}$ Greatest pitch of stays ☒ Working pressure of plate by rules ☒
Diameter of tubes $3\frac{1}{2}$ Pitch of tubes $4\frac{1}{2} \times 4\frac{1}{2}$ Material of tube plates ☒ Thickness: Front $1\frac{1}{2}$ Back $1\frac{1}{2}$ Mean pitch of stays $2\frac{1}{2} \times 8\frac{1}{2}$
Pitch across wide water spaces 11" Working pressures by rules ☒ Girders to Chamber tops: Material ☒ Depth and thickness of girder at centre $8\frac{1}{2} \times 1\frac{3}{4}$ Length as per rule ☒ Distance apart $8\frac{1}{2}$ Number and pitch of stays in each 2 at $8\frac{1}{2}$
Working pressure by rules ☒ Steam dome: description of joint to shell Double riveted % of strength of joint ☒
Diameter $25\frac{1}{2}$ Thickness of shell plates $\frac{1}{2}$ Material ☒ Description of longitudinal joint D.R. lat Diam. of rivet holes ☒
Pitch of rivets ☒ Working pressure of shell by rules ☒ Crown plates ☒ Thickness $\frac{1}{2}$ How stayed ☒

SUPERHEATER. Type Smith Date of Approval of Plan ☒ Tested by Hydraulic Pressure to 400 lb
Date of Test 14/3/21 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 ☒

QUESTED NOT TO WRITE ACROSS THIS MARGIN.

W 1274-0142

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, one set of feed pump valves, one set of bilge pump valves, one set of donkey chuck valves, one set of main chuck valves Two safety valve springs One tube expander, One span nut for limits Superheater a quantity of assorted bolts & nuts, shut iron & shut brass.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- Mar 14th to May 3/21
During erection on board vessel --
Total No. of visits 11

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 16/3/21 Slides 16/3/21 Covers 16/3/21 Pistons 16/3/21 Rods 16/3/21
Connecting rods 16/3/21 Crank shaft 16/3/21 Thrust shaft 16/3/21 Tunnel shafts 22/3/21 Screw shaft 31/3/21 Propeller 31/3/21
Stern tube 31/3/21 Steam pipes tested 14/3/21 Engine and boiler seatings 4/4/21 Engines holding down bolts 4/4/21
Completion of pumping arrangements 16/3/21 Boilers fixed ✓ Engines tried under steam ✓
Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓
Main boiler safety valves adjusted 19/4/21 Thickness of adjusting washers $P \frac{3}{16}$ S $\frac{3}{16}$
Material of Crank shaft ✓ Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts ✓ Identification Marks on Do. ✓
Material of Steam Pipes Steel Test pressure 600 lb.
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 Yes If so, state name of vessel S.S. WITHERSEA in APENRADE.

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

The machinery & boiler of this vessel are stated to have been built under Germanischer Lloyd Survey & classed by them.

The present Owner, Messrs The Hull Steam Towing & Ice Co. Ltd. Hull request that the Machinery & Boiler be surveyed with the view of being classed with Lloyd Register of Shipping.

So far as could be ascertained from this examination the material & workmanship are good & the machinery & boiler are properly fitted & secured. & the safety valves adjusted under steam to a working pressure of 200 lb. sq. in.
In my opinion the vessel is eligible for the record of L.M.C. 5-21.

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

Carwell

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 5 MAR 1921

L.M.C. 5, 21



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