

REPORT ON MACHINERY.

No. 27145

Date of writing Report 16 Jan. 1914 When handed in at Local Office 16.1.14 Port of Hull Received at London Office SAT. JAN. 31. 1914

No. in Survey held at Hull Date, First Survey Dec 16th Last Survey Jan 14th 1914

Reg. Book. 32 on the stul Se K "FILEY." (Number of Visits 38) Tons Gross 226 Net 87

Master Beverley Built at Beverley By whom built Coak Melton General When built 1914

Engines made at Hull By whom made Quoss & Smith Ltd. when made 1914

Boilers made at Hull By whom made Quoss & Smith Ltd. when made 1914

Registered Horse Power Hull Stn. Fisking & Ice Co. Ltd. Port belonging to Hull

Nom. Horse Power as per Section 28 58 49 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 10" 17" 28" Length of Stroke 24" Revs. per minute ✓ Dia. of Screw shaft as per rule 7.33" Material of as fitted 7.8" screw shaft S.

Is the 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 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 32"

Dia. of Tunnel shaft as per rule 5.76" Dia. of Crank shaft journals as per rule 6" Dia. of Crank pin 6 1/2" Size of Crank webs 4 1/2" x 2 1/2" Dia. of thrust shaft under collars 6 1/2" Dia. of screw 10-3" Pitch of Screw 9-3" No. of Blades 4 State whether moveable no Total surface 29.8 sq ft

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓

No. of Donkey Engines One Sizes of Pumps 6 1/2" x 4 3/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 2" The forward, one aft. In Holds, &c. Three 2" Ballast tank, Main Hold, & Fore hold. 2 1/2" ejector from all bilges.

No. of Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2" ejector

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 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 Hold suction How are they protected Wood 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

Dates of examination of completion of fitting of Sea Connections 27.11.13 of Stern Tube 27.11.13 Screw shaft and Propeller 27.11.13

Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Messrs. Bachmaworth Schütz & Knaack, Carnegie Steel Co.

Total Heating Surface of Boilers 835 Is Forced Draft fitted no No. and Description of Boilers One Single ended

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 17.12.13 No. of Certificate 2043

Can each boiler be worked separately ✓ Area of fire grate in each boiler 27.375 No. and Description of Safety Valves to each boiler Two, spring loaded Area of each valve 3.14 Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean dia. of boilers 129 3/32" Length 9-3" Material of shell plates S.

Thickness 3/32" Range of tensile strength 29-33 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams DRH long. seams DRH Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 7.59" Lap of plates or width of butt straps 16 1/4"

Per centages of strength of longitudinal joint 89.6 Working pressure of shell by rules 202.4 Size of manhole in shell 16 x 12

Size of compensating ring 40 x 30 x 3/32" No. and Description of Furnaces in each boiler 2 plain Material S. Outside diameter 38"

Length of plain part top 68 1/2" Thickness of plates crown 3/4" Description of longitudinal joint Welded No. of strengthening rings ✓

Working pressure of furnace by the rules 205 Combustion chamber plates: Material S. Thickness: Sides 3/4" Back 2 1/2" Top 1 1/2" Bottom 3/4"

Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8 1/4" x 8 1/4" Top 9 1/2" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202.8

Material of stays S. Diameter at smallest part 2.066 Area supported by each stay 76 Working pressure by rules 244 End plates in steam space: Material S. Thickness 1" Pitch of stays 18 x 12 How are stays secured Nuts Working pressure by rules 202 Material of stays S.

Diameter at smallest part 5.55 Area supported by each stay 221 Working pressure by rules 238 Material of Front plates at bottom S.

Thickness 1" Material of Lower back plate S. Thickness 1" Greatest pitch of stays 14" Working pressure of plate by rules 259

Diameter of tubes 3 1/4" Pitch of tubes 4 1/4" x 4 1/2" Material of tube plates S. Thickness: Front 1" Back 7/8" Mean pitch of stays 10.43

Pitch across wide water spaces 13 3/4" Working pressures by rules 203 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 8 1/4" x 1 1/4" Length as per rule 2-6" Distance apart 9 1/2" Number and pitch of stays in each 2 at 8"

Working pressure by rules 202 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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two each top and bottom connecting rod bolts nuts, two main bearing bolts nuts, one set of coupling bolts nuts, one set each feed and bilge pump valves, iron of various sizes, a quantity of assorted bolts nuts etc. Impeller shaft for centrifugal pump.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

G. S. Robinson

Manufacturer.

Secretary.

Dates of Survey while building { During progress of work in shops - - - 1912 Dec 16. 1913 Jan 15 Apr 12, 22, 24, 29 May 5, 22 Jun 10, 18, 27 Jul 14 Aug 21 Sep 13
During erection on board vessel - - - Oct 7, 17, 28, 30 Nov 11, 18, 21, 25, 26, 27, 28 Dec 2, 6, 9, 12, 17, 18, 23, 31 1914 Jan 2, 5, 8, 12, 14
Total No. of visits 38

Is the approved plan of main boiler forwarded herewith

yes ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 21.11.13 Slides 21.11.13 Covers 21.11.13 Pistons 25.11.13 Rods 12.12.13

Connecting rods 12.12.13 Crank shaft 25.11.13 Thrust shaft 25.11.13 Tunnel shafts ✓ Screw shaft 25.11.13 Propeller 25.11.13

Stern tube 25.11.13 Steam pipes tested 2.1.14 Engine and boiler seatings 27.11.13 Engines holding down bolts 31.12.13

Completion of pumping arrangements 5.1.14 Boilers fixed 5.1.14 Engines tried under steam 8.1.14

Main boiler safety valves adjusted 8.1.14 Thickness of adjusting washers SV $\frac{5}{16}$ " PV $\frac{3}{8}$ "

Material of Crank shaft S Identification Mark on Do. 1195 Material of Thrust shaft S Identification Mark on Do. 1195

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts S Identification Marks on Do. 1195

Material of Steam Pipes Copper solid drawn Test pressure 400 lbs. hyd. press. ✓

Is an installation fitted for burning oil fuel ✓

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 engines and boiler of this vessel have been constructed under special survey in accordance with the Rules. The Materials and workmanship are sound and good. The Boiler tested by hydraulic pressure and with the engines secured on board and tested under steam. They are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of + LMC 1. 14 in the Register book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 1. 14.

J. G. Mackillop
2/3/14

The amount of Entry Fee ... £ 1 :
Special ... £ 8 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 28/1/1914
When received, 30/1/1914

Committee's Minute

Assigned

10 FEB 3 1914

+ LMC 1. 14

MACHINERY CERTIFICATE
WRITTEN.



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Foundation