

REPORT ON MACHINERY.

No. 27041

Date of writing Report 16th Dec 1913 When handed in at Local Office 23.12.13 Port of Hull Received at London Office MON. DEC. 29. 1913

No. in Survey held at Hull Date, First Survey July 14th Last Survey Dec 15th 1913

Reg. Book. 19. Sup. on the steel deck "OAKA" (Number of Visits 24 Gross 313 Tons Net 136 When built 1913)

Master Bell Built at Selly By whom built Cochrane & Sons Ltd

Engines made at Hull By whom made Amos & Smith Ltd when made 1913

Boilers made at Hull By whom made Amos & Smith Ltd when made 1913

Registered Horse Power 87 Owners A. Baunister Port belonging to Grimeby

Nom. Horse Power as per Section 28 87 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 13 $\frac{1}{2}$, 22 $\frac{3}{4}$, 37 Length of Stroke 24 Revs. per minute ✓ Dia. of Screw shaft as per rule Material of ✓

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 2'9"

Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin 7 $\frac{1}{4}$ Size of Crank webs 14 $\frac{1}{2}$ x 4 $\frac{3}{4}$ of thrust shaft under collars 7 $\frac{1}{4}$ Dia. of screw 9'6" Pitch of Screw 11'2" No. of Blades 4 State whether moveable no Total surface 33 $\frac{1}{2}$

No. of Feed pumps 1 Diameter of ditto 2 $\frac{7}{8}$ Stroke 12 Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2 $\frac{7}{8}$ Stroke 12 Can one be overhauled while the other is at work ✓

No. of Donkey Engines 2 Sizes of Pumps 6x3x6, 6 $\frac{1}{2}$ x4 $\frac{3}{4}$ x6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2-2" One forward, One aft. In Holds, &c. 4-2" Fore peak, Fresh hold, Slushwell, Stow hold. 2" ejector from all bilges.

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size 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 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 Stokehold 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 15.10.13 of Stern Tube 15.10.13 Screw shaft and Propeller 15.10.13

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

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Blechwerk Schrey-Kraus-Huelshagen

Total Heating Surface of Boilers 1500 Is Forced Draft fitted no No. and Description of Boilers One Single-ended

Working Pressure 180lbs Tested by hydraulic pressure to 360lbs Date of test 26.11.13 No. of Certificate 2039

Can each boiler be worked separately ✓ Area of fire grate in each boiler 43 $\frac{1}{2}$ No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 5.9 Pressure to which they are adjusted 183lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean dia. of boilers 13'6" Length 10'6" Material of shell plates S

Thickness 1 $\frac{1}{16}$ Range of tensile strength 29-33 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams Ord

long. seams 1/35 Diameter of rivet holes in long. seams 1 $\frac{1}{8}$ Pitch of rivets 7.77 Lap of plates or width of butt straps 16 $\frac{3}{4}$

Per centages of strength of longitudinal joint 90 Working pressure of shell by rules 186 Size of manhole in shell 16x12

Size of compensating ring 40x30x1 $\frac{1}{16}$ No. and Description of Furnaces in each boiler 3, plain Material S Outside diameter 40 $\frac{1}{16}$

Length of plain part 80 $\frac{1}{16}$ Thickness of plates 25 Description of longitudinal joint welded No. of strengthening rings one

Working pressure of furnace by the rules 193 Combustion chamber plates: Material S Thickness: Sides 23 Back 11 $\frac{1}{16}$ Top 11 $\frac{1}{16}$ Bottom 23

Pitch of stays to ditto: Sides 9 $\frac{1}{4}$ x9 $\frac{1}{2}$ Back 8 $\frac{1}{4}$ x10 Top 8 $\frac{1}{2}$ x9 $\frac{1}{2}$ Are stays fitted with nuts or riveted heads nuts Working pressure by rules 194

Material of stays S Diameter at smallest part 2.397 Area supported by each stay 87.7 Working pressure by rules 200lbs End plates in steam space: Material S Thickness 18 Pitch of stays 17x17 $\frac{1}{2}$ How are stays secured as per rules Working pressure by rules 201 Material of stays S

Diameter at smallest part 6 $\frac{1}{16}$ Area supported by each stay 297.5 Working pressure by rules 213 Material of Front plates at bottom S

Thickness 3 $\frac{1}{32}$ Material of Lower back plate S Thickness 1 $\frac{1}{8}$ Greatest pitch of stays 13 $\frac{3}{4}$ Working pressure of plate by rules 183

Diameter of tubes 3 $\frac{1}{2}$ Pitch of tubes 5x4 $\frac{1}{4}$ Material of tube plates S Thickness: Front 3 $\frac{1}{32}$ Back 27 Mean pitch of stays 8.84

Pitch across wide water spaces 13 $\frac{3}{4}$ Working pressures by rules 192 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 $\frac{1}{2}$ x1 $\frac{1}{2}$ Length as per rule 2'9" Distance apart 9 $\frac{1}{2}$ Number and pitch of stays in each 2 at 8 $\frac{1}{2}$

Working pressure by rules 189 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 2021

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?

no.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two each top and bottom end 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.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

W. S. Wade

Managing Director.

Manufacturer.

Dates of Survey while building

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

Per DP 1913: Jul 14. Aug 21. Sep 13. 25. Oct 7. 11. 15. 16. 17. 28. 30. Nov 7. 11.
Nov 15. 18. 21. 25. 26. Dec 2. 4. 8. 9. 11. 15.
24

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 16.10.13. Slides 16.10.13. Covers 30.10.13. Pistons 30.10.13. Rods 7.11.13.

Connecting rods 7.11.13. Crank shaft 15.11.13. Thrust shaft 15.11.13. Tunnel shafts 15.11.13. Screw shaft 11.10.13. Propeller 11.10.13.

Stern tube 11.10.13. Steam pipes tested 4.12.13. Engine and boiler seatings 15.10.13. Engines holding down bolts 2.12.13.

Completion of pumping arrangements 2.12.13. Boilers fixed 2.12.13. Engines tried under steam 11.12.13.

Main boiler safety valves adjusted 11.12.13. Thickness of adjusting washers SV $\frac{3}{8}$ "SV $\frac{3}{8}$ "

Material of Crank shaft S. Identification Mark on Do. 1190. Material of Thrust shaft S. Identification Mark on Do. 1190.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts S. Identification Marks on Do. 1190.

Material of Steam Pipes Copper Solid drawn. Test pressure 360lbs. hyd. pressure.

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 12.13. in the Register book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12.13.

J.W.D.
29/12/13

The amount of Entry Fee ... £ 1 : :
Special ... £ 13 : 1 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 8 : 2/31/12/13

When applied for.

24/12/13

When received.

2/31/12/13

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUE. DEC. 30. 1913

Assigned

+ LMC 12.13

MACHINERY CERTIFICATE
WRITTEN.



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Foundation