

# REPORT ON MACHINERY.

No. 31933

Received at London Office TUE. JUL. 6 1920

4.

Writing Report

19

When handed in at Local Office

5/7/1920 Port of Hull

Date, First Survey Dec 5/18 Last Survey Jun 4<sup>th</sup> 1920

(Number of Visits 60)

Survey held at Hull

on the ST. THOMAS ALEXANDRA

Tons { Gross 290 Net 127

Built at Beverley

By whom built Geo. W. W. & Co. Ltd. When built 1920

Engines made at Hull

By whom made Amos & Smith Ltd. No. 3102 when made 1920

Engines made at Hull

By whom made Amos & Smith Ltd. No. 3072 when made 1920

Registered Horse Power

Owners The Admiralty

Port belonging to

Horse Power as per Section 28

87.86 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

Engines, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

No. of Cylinders 12 1/2 21 35 Length of Stroke 26

Revs. per minute 109

Dia. of Screw shaft

Material of Steel

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

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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 34 1/2

Dia. of Tunnel shaft as per rule 6.58 Dia. of Crank shaft journals as per rule 6.95 6.91 Dia. of Crank pin 7 1/8 Size of Crank web 14 1/2 x 4 1/2 Dia. of thrust shaft under

as fitted 7 1/8 Dia. of screw 9 1/2 Pitch of Screw 11 1/2 No. of Blades 4 State whether moveable no Total surface 36.5

No. of Feed pumps 1 Diameter of ditto 2 3/4 Stroke 12 Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 2 3/4 Stroke 12 Can one be overhauled while the other is at work

No. of Donkey Engines 1 Sizes of Pumps 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3-2" Direct Forward, aft & ejector In Holds, &c. 3-2" Forehold, slushwell

Ejector from slushwell

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump pump 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

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 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

How are the pipes carried through the bunkers Forward Suctions 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

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

MANUFACTURERS, &c.—(Letter for record S. Manufacturers of Steel John Spencer & Son

Is Forced Draft fitted no No. and Description of Boilers One Single-ended

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 29.10.19 No. of Certificate 3402

Is each boiler worked separately Area of fire grate in each boiler 48.75 No. and Description of Safety Valves to

boiler Two-spring Area of each valve 4.9 Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 11" Int. dia. of boilers 16 1/2 Length 10 1/2 Material of shell plates S.

Thickness 1/32 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 10R.

g. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 8 Lap of plates or width of butt straps 17

Percentages of strength of longitudinal joint rivets 89.3 Working pressure of shell by rules 180 lbs. Size of manhole in shell 16" x 12"

Area of compensating ring 9 x 1/32 No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 40 9/16

Length of plain part top 8 1/2 Thickness of plates crown 25 Description of longitudinal joint welded No. of strengthening rings

bottom 7 1/2 Thickness of plates bottom 32 Working pressure by rules 215 Material of Front plates at bottom S.

Working pressure of furnace by the rules 188 Combustion chamber plates: Material S. Thickness: Sides 1/16 Back 3/32 Top 1/16 Bottom 7/8

Pitch of stays to ditto: Sides 9 1/2 x 9 1/2 Back 9 x 9 Top 9 1/2 x 9 1/2 stays are fitted with nuts or riveted heads nuts Working pressure by rules 182

Material of stays S. Area at smallest part 2.07 Area supported by each stay 90.25 Working pressure by rules 206 End plates in steam space:

Material S. Thickness 1 1/16 Pitch of stays 17 1/2 x 17 How are stays secured ON TW Working pressure by rules 181 Material of stays S.

Area at smallest part 6.10 Area supported by each stay 295 Working pressure by rules 215 Material of Front plates at bottom S.

Thickness 3/32 Material of Lower back plate S. Thickness 15/16 Greatest pitch of stays 1 1/2 x 9 Working pressure of plate by rules 219

Diameter of tubes 3 1/2 Pitch of tubes 5 x 4 1/4 Material of tube plates S. Thickness: Front 3/32 Back 7/8 Mean pitch of stays 10

Pitch across wide water spaces 14 Working pressures by rules 184 lbs Girders to Chamber tops: Material S. Depth and

Thickness of girder at centre 8 1/2 x 1 3/4 Length as per rule 32 Distance apart 9 1/2 Number and pitch of stays in each Two @ 9 1/2

Working pressure by rules 197 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

PERHEATER. 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

002498-002505-0217

2020

Lloyd's Register Foundation



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 and nuts, two main bearing bolts & nuts, one set of coupling bolts and 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,

J. R. Robinson

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1918: Jan Dec 5 11 20 1919: Jan 20 Mar 6 13 Apr 10 12 16 24 25 27 29 30 May 10 24 Jun 16 18  
During erection on board vessel - - 22 Jul 2 3 9 10 13 16 22 23 30 Aug 12 14 16 21 23 25 29 Sep 2 3 9 10 17 25 26 Oct 2 6 8 14 17 24 29  
Total No. of visits { Wed 3 7 11 13 Dec 2 9 1920 Jan 24 Mar 8 11 Jun 11

Is the approved plan of main boiler forwarded herewith sent Parisianly

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 17.9.20. Slides 17.9.20. Covers 17.9.20. Pistons 2.10.19. Rods 2.10.19. Connecting rods 2.10.19. Crank shaft 17.10.19. Thrust shaft 24.10.19. Tunnel shafts ✓ Screw shaft 9.7.19. Propeller 9.7.19. Stern tube 9.7.19. Steam pipes tested 8.3.20. Engine and boiler seatings 30.7.19. Engines holding down bolts 8.3.20. Completion of pumping arrangements 4.6.20. Boilers fixed 8.3.20. Engines tried under steam 4.6.20. Completion of fitting sea connections 30.7.19. Stern tube 30.7.19. Screw shaft and propeller 30.7.19. Main boiler safety valves adjusted 4/6/20. Thickness of adjusting washers  $P \frac{3}{8}$  S.  $\frac{5}{16}$ . Material of Crank shaft S. Identification Mark on Do. 2393. Material of Thrust shaft S. Identification Mark on Do. 2261. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S. Identification Marks on Do. 2362. Material of Steam Pipes Steel. Test pressure 54 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

yes

Is this machinery duplicate of a previous case

yes

If so, state name of vessel

"George Adrell"

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

The engines & boilers 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 & 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 6.20 in the Register book.

It is submitted that this vessel is eligible for THE RECORD + LMC 6.20.

The amount of Entry Fee ... £ 2 : : When applied for, 30/6/20  
Special ... £ 26 : 2 : :  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : : When received, 3-7-20

Committee's Minute

FRI JUL 9 1920

Assigned

+ LMC 6.20

MACHINERY CERT.  
WRITTEN.



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Foundation