

Rpt. 4.

REPORT ON MACHINERY.

No. 39505

Received at London Office

JAN 1 1920

Date of writing Report

31. 12. 1919. When handed in at Local Office

2. 1. 1920 Port of Glasgow.

No. in Survey held at Reg. Book.

TROON & AYR.

Date, First Survey 2nd Apr 1919. Last Survey 30. 12. 1919.

on the S.S. "JESSIE SUMMERFIELD"

Master G. Summerfield Built at AYR.

By whom built Aitha S.B. Co (N^o 372)

Tons Gross 423 Net 161 When built 1919.

Engines made at TROON

By whom made Aitha S.B. Co (N^o 104)

when made 1919

Boilers made at GLASGOW

By whom made Dunsmuir & Jackson (N^o 123) when made 1919

Registered Horse Power

Owner's Summerfield S.S. Co.

Port belonging to Liverpool

Nom. Horse Power as per Section 28 88.9 89.

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines Compound Surf. Condg. No. of Cylinders 2. No. of Cranks 2.

Dia. of Cylinders 18". 36" Length of Stroke 27" Revs. per minute 106. Dia. of Screw shaft as per rule 8.09 Material of screw shaft as fitted 8 3/8 Steel/IRON

Is the screw shaft fitted with a continuous liner the whole length of the stern tube 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

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 2'-9 1/2"

Dia. of Tunnel shaft as per rule 4.44 Dia. of Crank shaft journals as per rule 4.84 Dia. of Crank pin 8 3/8 Size of Crank webs 15 1/2 x 5 1/8 Dia. of thrust shaft under collars 8 3/8 Dia. of screw 9'-5" Pitch of Screw 12'-6" No. of Blades 4 State whether moveable Total surface 31 1/2

No. of Feed pumps 2. Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work

No. of Bilge pumps 2. Diameter of ditto 3" Stroke 14" Can one be overhauled while the other is at work

No. of Donkey Engines 2. Sizes of Pumps 5' x 3 1/2' x 6" General Service No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 1-2" & 1-2 1/2" Special In Holds, &c. 3-2"

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size 4" - 2 1/2"

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates 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 Are the Blow Off Cocks fitted with a spigot and brass covering plate

Are all pipes carried through the bunkers Bilge & peak tank 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

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

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

MANUFACTURERS, &c.—(Letter for record S.) Manufacturers of Steel Steel Coy of Scotland - Stewart & Lloyd.

Heating Surface of Boilers 824 sq ft Is Forced Draft fitted No. and Description of Boilers One S.E. Marine

Working Pressure 130 lbs. Tested by hydraulic pressure to 260 lbs. Date of test 26. 8. 19 No. of Certificate 14864

Can each boiler be worked separately Area of fire grate in each boiler 53 1/2 sq ft No. and Description of Safety Valves 10

Are they fitted with easing gear Area of each valve 4.06 Pressure to which they are adjusted 135 lbs

Distance between boilers uptakes and bunkers 8'-3" Mean dia. of boilers 13'-9" Length 10'-6" Material of shell plates

Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Classes of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveled heads 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 Pitch of stays How are stays secured 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 Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

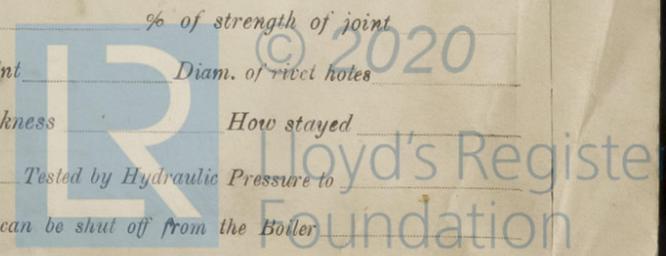
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

REPORT SEPARATE

SEE

003421-003428-0222 1/2



IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main beam bolts, 1 set coupling bolts, 1 set feed & helge pump valves, 1 set air pump valves, 1 set circulating pump valves, 4 propeller blades, 6 boiler tubes, 1/2 set firebars, 2 beer bearings, quantity assorted bolts & nuts, iron of various sizes

The foregoing is a correct description,

FOR ALBA SHIPBUILDING CO., LIMITED

J. McNaughton

Manufacturer.

Dates of Survey while building { During progress of work in shops --- 19.19 May 13. June 2. 4. 9. 23. July 1. 8. 10. 16. Aug 5. 14. 19. 25. 29. Sept 4. 8. 12. 24. Oct 2. 7. 10. 16. 21. 23. 28. 31. Nov 4. 6. 10. 13. 19. 24. Dec 12. 14. 19. 23. 26. 29. 30. } Total No. of visits 40

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 19. 8. 19 Slides 2. 10. 19 Covers 16. 7. 19 Pistons 16. 10. 19 Rods 16. 10. 19 Connecting rods 14. 8. 19 Crank shaft 2. 10. 19 Thrust shaft 2. 10. 19 Tunnel shafts ✓ Screw shaft 2. 10. 19 Propeller 28. 10. 19 Stern tube 28. 10. 19 Steam pipes tested 19. 12. 19 Engine and boiler seatings 12. 12. 19. Engines holding down bolts 19. 12. 19 Completion of pumping arrangements 19. 12. 19. Boilers fixed 23. 12. 19. Engines tried under steam 29. 12. 19. Completion of fitting sea connections 2. 10. 19 Stern tube 2. 10. 19 Screw shaft and propeller 2. 10. 19 Main boiler safety valves adjusted 29. 12. 19. Thickness of adjusting washers 5/16" S. 1/32" P.

Material of Crank shaft *Steel* Identification Mark on Do. *No 107 LLOYD'S 2.10.19 P.T.B.* Material of Thrust shaft *Steel* Identification Mark on Do. *No 107 LLOYD'S 2.10.19 P.T.B.* Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Steel* Identification Marks on Do. *No 107 LLOYD'S 2.10.19 P.T.B.* Material of Steam Pipes *Copper* Test pressure *260 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *The materials and workmanship*

are good. This machinery has been built under special survey in accordance with the Rules and approved plans, securely fitted aboard and tried with satisfactory results under steam.

By an oversight on the part of the builders, a web forming a diaphragm between the suction and discharge sides of the circulating pump at the bottom was omitted. The fact was only discovered on the day of the dock trial. As a temporary measure the passage concerned was blocked with cement. The machinery was afterwards tested for about 6 hours at sea with satisfactory results and on the conclusion of trials the pump was opened out and found satisfactory. It has been arranged to fit new type of door to the circulating pump which will make the omitted diaphragm unnecessary. Plans showing the existing & proposed arrangements attached..

In my opinion this vessel machinery is suitable for class with record + L.M.C. 12, 19 subject to the alteration of the circulating pump.

The amount of Entry Fee ... £ 1-0-0. When applied for, 5/11/20.
Special ... £ 7-5-0
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ 5-5-0 31/1/20

A. R. Allen

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 6 - JAN 1920**

MACHINERY CERT. WRITTEN 7/1/20

Assigned + L.M.C 12, 19 subject to

Note Limit.



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Glasgow Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minutes.

Glasgow.

"JESSIE SUMMERFIELD"

being carried out within three months.

An arrangement has been made between the builders and owners for this to be done.

M. R. Allen

A.B. A sketch attached. Omitted rib is marked A
Space filled with cement is marked B.

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