

# REPORT ON MACHINERY

No. 10809.

THU. DEC. 23 1920

Received at London Office

Date of writing Report 17<sup>th</sup> Dec. 1920 When handed in at Local Office 22<sup>nd</sup> Dec. 1920 Port of Southampton

Survey held at Southampton

Date, First Survey 18<sup>th</sup> March Last Survey 15<sup>th</sup> Dec. 1920

Book. on the S.S. "ALLANWATER"

(Number of Visits 15)

Master John Mills Built at Southampton By whom built Day, Summers & Co. Ltd. Tons Gross 496.14 Net 1920

Engines made at Coathbridge By whom made W. Beardmore & Co. Ltd. when made 1920

Boilers made at Southampton By whom made Day, Summers & Co. Ltd. when made 1920

Registered Horse Power Owners J. W. Fisher & Co. Port belonging to Liverpool

Net Horse Power as per Section 28 83 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

## ENGINES, &c.—Description of Engines

No. of Cylinders No. of Cranks

Length of Stroke Revs. per minute 102 Dia. of Screw shaft as per rule as fitted Material of screw shaft

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

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

boilers are fitted, is the shaft lapped or protected between the liners Length of stern bush

Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under

boilers Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

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

No. of Donkey Engines 2 Sizes of Pumps 6"x4"x6" & 6"x6"x6" No. and size of Suctions connected to both Bilge and Donkey pumps

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

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

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 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

That pipes are carried through the bunkers Ford. Suctions How are they protected Wood casings

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 NONE Is it fitted with a watertight door worked from

## BOILERS, &c.—(Letter for record S) Manufacturers of Steel Port Talbot Steel Co. & P. Pigott & Co.

Total Heating Surface of Boilers 1530 sq. ft. Is Forced Draft fitted No No. and Description of Boilers One Single Ended.

Working Pressure 180 lb. Tested by hydraulic pressure to 360 lb. Date of test 20-8-20 No. of Certificate 334

Can each boiler be worked separately Area of fire grate in each boiler 54 sq. ft. No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 7.06 sq. in. Pressure to which they are adjusted 183 lb. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 3'-6" Mean dia. of boilers 12'-7 1/2" Length 10'-10 7/8" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged Flanged Descrip. of riveting: cir. seams D.R.L.A.P.

g. seams T.R. BUTTS Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/8" Lap of plates or width of butt straps 1'-4"

Percentages of strength of longitudinal joint rivets 87.7 Working pressure of shell by rules 180.5 Size of manhole in shell 16"x12"

Size of compensating ring 2'-8"x2'-4" No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 3'-3 1/4"

Length of plain part top 6'-6 1/2" bottom 6'-6 1/4" Thickness of plates crown 3/4" bottom 3/4" Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 186.9 Combustion chamber plates: Material Steel Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 3/4"

Pitch of stays to ditto: Sides 8"x9" Back 8 1/8"x9 1/8" Top 8 1/2"x8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 199.3

Material of stays Steel Area at smallest part 1.73 sq. in. Area supported by each stay 74.14 sq. in. Working pressure by rules 186.6 End plates in steam space:

Material Steel Thickness 1 1/8" Pitch of stays 18"x18" How are stays secured DOUBLE NUTS & WASHERS Working pressure by rules 185 Material of stays Steel

Area at smallest part 6.33 sq. in. Area supported by each stay 324 sq. in. Working pressure by rules 203.1 Material of Front plates at bottom Steel

Thickness 1 5/16" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 14"x8 1/8" Working pressure of plate by rules 187.7

Diameter of tubes 3 1/4" Pitch of tubes 4 1/16" Material of tube plates Steel Thickness: Front 1 5/16" Back 2 1/32" Mean pitch of stays 8 7/8"

Pitch across wide water spaces 14" Working pressures by rules 300 lb. Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 7 1/2"x1 3/4" Length as per rule 2'-6 1/8" Distance apart 8 3/4" Number and pitch of stays in each 2-8 1/2"

Working pressure by rules 183.9 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

Low

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W429-0107

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— Two Conn<sup>g</sup> Rod top-end bolts & nuts, two Conn<sup>g</sup> Rod bottom end bolts & nuts, two Main bearing bolts & nuts, 1 set of Coupling bolts & nuts, 1 set of Feed pump valves, 1 set of Bidge pump valves, 1 set of Air pump valves, 1 set of Circulating pump valves, 6 Condenser tubes, 12 Condenser females, 3 Plain Boiler tubes, 2 Dry. and Boil. bolts & nuts, 1 set of pistons for one furnace, 6 Gauge glasses, 1 Safety Valve spring, 1 Propeller, 1 set of Check valves, 6 cylinder cover studs & nuts, 6 Gunning bolts & nuts, 1 set of Valves for Donkey Pump. Iron of Various sizes.

The foregoing is a correct description,

For DAY SUMMERS & Co. Ltd.

Manufacturer.

Graham C. H. Day  
Director

Dates of Survey while building	During progress of work in shops --	During erection on board vessel --	Total No. of visits
18.25	3	20	15
28	4	4.10.19	
23	6	11	
22	7	12	
18.20.27	8	12	
27	9	8	

Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts	Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Crank shaft	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Thrust shaft	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tunnel shafts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Screw shaft	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Propeller	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Stern tube	27-8-20	Steam pipes tested 10-11-20	Engine and boiler seatings 27-9-20	Engines holding down bolts 10-11-	
Completion of pumping arrangements	10-11-20	Boilers fixed 20-10-20	Engines tried under steam 15-12-20		
Completion of fitting sea connections	27-9-20	Stern tube 27-9-20	Screw shaft and propeller 27-9-20		
Main boiler safety valves adjusted	8-12-20	Thickness of adjusting washers $P = \frac{15}{32}$ , $S = \frac{13}{32}$			
Material of Crank shaft	<input checked="" type="checkbox"/>	Identification Mark on Do. <input checked="" type="checkbox"/>	Material of Thrust shaft <input checked="" type="checkbox"/>	Identification Mark on Do. <input checked="" type="checkbox"/>	
Material of Tunnel shafts	<input checked="" type="checkbox"/>	Identification Marks on Do. <input checked="" type="checkbox"/>	Material of Screw shafts <input checked="" type="checkbox"/>	Identification Marks on Do. <input checked="" type="checkbox"/>	
Material of Steam Pipes	Copper		Test pressure 360 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 yes If so, state name of vessel S.S. "Cambali"

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

The Boiler has been built under Special Survey, and efficiently fitted on board, also the Machinery, as per Glasgow Report No. 40395 (attached)  
The materials and workmanship are sound and good.  
The Spare gear is in order with the rule requirements.  
On Trial the Machinery & Boiler proved satisfactory, and the same is eligible in my opinion to have notation + L.M.C. 12.20.

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 12.20

Re M

J.M.

24/12/20

The amount of Entry Fee	Special	Donkey Boiler Fee	Travelling Expenses (if any)
£ 6 : 4	£ 6 : 4	£ 6 : 4	£ 6 : 4

When applied for.

When received.

Committee's Minute

Assigned

FRI. DEC. 31 1920

+ L.M.C. 12.20

CERTIFICATE WRITTEN

A. H. Bayle  
Engineer Surveyor to Lloyd's Register of Shipping.



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