

# REPORT ON MACHINERY.

No. 40076  
WED JUN 16 1920  
FRI 22 JUL 1921

Date of writing Report 19 When handed in at Local Office 12.6.1920. Port of Glasgow.  
No. in Survey held at KILMARNOCK. Date, First Survey 9.11.18. Last Survey 11-6-20 19  
Reg. Book. on the S. SOUTH QUAY (Number of Visits 112)

Master Built at Montrose By whom built Coaster Construction Co (No. 104) When built 1920.  
Engines made at Kilmarnock By whom made Grant, Ritchie & Co (No. 1000). when made 1920.  
Boilers made at Manchester By whom made James Adams (Nos. 4825-6) when made 1920.  
Registered Horse Power 105 125. Port belonging to London.  
Nom. Horse Power as per Section 28 105 125. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

**ENGINES, &c.**—Description of Engines Triple Expansion Surf. Cuds. No. of Cylinders 3. No. of Cranks 3.  
Dia. of Cylinders 15" 25" 40" Length of Stroke 27" Revs. per minute Dia. of Screw shaft as per rule 8.66" Material of screw shaft as fitted 8 7/8" 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 Yes 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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 3' 4"  
Dia. of Tunnel shaft as per rule 4.46" Dia. of Crank shaft journals as per rule 7.83" Dia. of Crank pin 8 1/4" Size of Crank webs 12 7/8" x 4 15/16" Dia. of thrust shaft under collars 8" Dia. of screw 11 1/2" Pitch of Screw 9' 9" No. of Blades 4 State whether moveable 2 Total surface 344 sq. ft.  
No. of Feed pumps 2. Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2. Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 2 Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size  
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  
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  
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  
What pipes are carried through the bunkers How are they protected  
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

**BOILERS, &c.**—(Letter for record ) Manufacturers of Steel  
Total Heating Surface of Boilers 1820 sq. ft. Is Forced Draft fitted No. and Description of Boilers 2 - S.E. Marine  
Working Pressure 180 Tested by hydraulic pressure to Date of test No. of Certificate  
Can each boiler be worked separately Area of fire grate in each boiler 24.6 sq. ft. No. and Description of Safety Valves to each boiler Are they fitted with easing gear  
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps  
Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell  
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter  
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings bottom  
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 riveted 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

SEE SEPARATE REPORT



W792-0117

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: 2 top end bolts, 2 bottom end bolts, 2 main bearing bolts, 1 set coupling bolts; 1 set air, feed, bilge and circulating pump valves; 1 set feed check valves; 1 set piston rings for MP; 1 set rings and springs for LP; 1 propeller; 24 condenser ferrules; 1 set water valves and piston rings for auxiliary feed pump; 1 set water valves and piston rings for donkey pump; 1 boiler tube expander; quantity assorted bolts, nuts and iron of various sizes; 6 tube stoppers; tools, spanners, packings etc as per specification

The foregoing is a correct description,

For Grant, Ritchie & Co., Ltd.,

*G. W. Baird* Director.

Manufacturer.

Dates of Survey while building	During progress of work in shops	1918	Nov 9-20. Dec 5-23. 30.	1919	Jan 8-22 Feb 5 Mar 20 Apr 10-16. May 15-20-22
		During erection on board vessel	1920	June 9-14. July 4 Aug 15 Sept 3-12-26	Oct 10-20-28 Nov 4-11-18 Dec 2-12-19.
			Total No. of visits	42	

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 10.4.19 Slides 15.8.19 Covers 10.4.19 Pistons 20.3.19 Rods 20.3.19

Connecting rods 20.3.19 Crank shaft 16.4.19 Thrust shaft ~~4.7.19~~ Tunnel shafts 4.4.19 Screw shaft 26-5-20 Propeller ✓

Stern tube 26-5-20 Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓

Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓

Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓

Main boiler safety valves adjusted ✓ Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. LLOYD'S 4841 12 W. Material of Thrust shaft Steel Identification Mark on Do. NOT SEEN AT LLOYD'S 4841 12 W.

Material of Tunnel shafts Steel Identification Marks on Do. LLOYD'S 4841 12 W. Material of Screw shafts Steel Identification Marks on Do. 4841 12 W.

Material of Steam Pipes Test 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 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 Specification and Rules.

The propeller and thrust shaft were not supplied by the Kilmarnock Works and will require to be seen at the fitting out Port.

These engines have been sent to Montreal to be fitted on board and will be eligible in our opinion to have record of 1/2 m.c. (with date) when survey is complete.

Propeller & thrust shafts examined & found in good order. Engines now satisfactorily completed on board, as per Survey Report No 8313.

*John H. Mackay*

Received 16/4/20, as per Secretary's letter (of that date) to Dundee.

The amount of Entry Fee	£ 30:0:0	When applied for.
Special	£ :	paid by ship in the hotel Rotterdam
Donkey Boiler Fee	£ :	When received, rec'd 24/4/20.
Travelling Expenses (if any)	£ :	

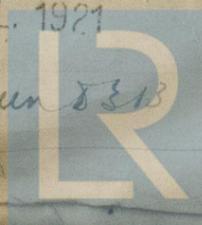
*J. S. Selby*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 15 JUN 1920**

Assigned Deferred.

FRI. 29 JUL. 1921

See Dun 8313



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

14.6.20