

# REPORT ON MACHINERY

No. 40318

Received at London Office 4 MAY. 1921

Date of writing Report 16.8.20 When handed in at Local Office 30.8.20 Port of Glasgow 18th April 1921  
 No. in Survey held at Glasgow (Ardrossan) Date, First Survey 11th June Last Survey 5th July 1920  
 Reg. Book. on the Sl. No 308 "Ardmore" (Number of Visits) 23 Gross 1679 Net 706  
 Master Built at Ardrossan By whom built Ardrossan S.S. Co. Sl. No 308 When built 1920  
 Engines made at Glenoch By whom made Umeaid when made  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made  
 Registered Horse Power Owners Cork S.S. Co. Port belonging to \_\_\_\_\_  
 Nom. Hors. Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

## ENGINES, &c.—Description of Engines

Dia. of Cylinders			Length of Stroke			Revs. per minute			Dia. of Screw shaft as per rule as fitted			Material of screw shaft					
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 does not fit tightly at the part					
If the liner is in more than one length are the joints burned												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					
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 collars					
Dia. of screw			Pitch of Screw			No. of Blades			State whether moceable			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			Sizes of Pumps			No. and size of Suctions connected to both Bilge and Donkey pumps											
In Engine Room			<u>5 @ 2 1/2</u>			<u>1 @ 2 1/2 F. Peak.</u>			In Holds, &c. <u>1 @ 3 1/2 in N°2. 2 @ 2 1/2 N°1</u>								
No. of Bilge Injections			sizes			Connected to condenser, or to circulating pump			Is a separate Donkey Suction fitted in Engine room & size <u>yes 2 1/2"</u>								
Are all the bilge suction pipes fitted with roses <u>Yes</u>												Are the roses in Engine room always accessible <u>Yes</u>			Are the sluices on Engine room bulkheads always accessible		
Are all connections with the sea direct on the skin of the ship <u>Yes</u>												Are they Valves or Cocks <u>Both</u>					
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates <u>Yes</u>												Are the Discharge Pipes above or below the deep water line <u>Above</u>					
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel <u>Yes</u>												Are the Blow Off Cocks fitted with a spigot and brass covering plate <u>Yes</u>					
What pipes are carried through the bunkers <u>None</u>												How are they protected					
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times <u>Yes</u>																	
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges <u>Yes</u>																	
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			Is Forced Draft fitted			No. and Description of Boilers					
Working Pressure			Tested by hydraulic pressure to			Date of test			No. of Certificate		
Can each boiler be worked separately			Area of fire grate in each boiler			No. and Description of Safety Valves to each boiler					
Area of each valve			Pressure to which they are adjusted			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..... bottom.....			Thickness of plates crown..... bottom.....			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 riveted heads			Working pressure by rules		
Material of stays			Area at smallest part			Area supported by each stay			Working pressure by rules		
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			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.....					

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1920 Jun 11 July 5 Oct 20 27 Nov 3 10 16 25 Dec 1 15 22 (1921) Jan 19 28 Feb 4 11 Mar 16 22 23 24 Apr 6  
 { During erection on board vessel --- } Apr 11 18.  
 Total No. of visits . 23.

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods  
 Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller  
 Stern tube Steam pipes tested Engine and boiler seatings 11-6-20 Engines holding down bolts  
 Completion of pumping arrangements 28-1-21 Boilers fixed 25-11-20 Engines tried under steam  
 Completion of fitting sea connections 5-7-20 Stern tube 5-7-20 Screw shaft and propeller 5-7-20  
 Main boiler safety valves adjusted Thickness of adjusting washers  
 Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.  
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.  
 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 Yes  
 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.)

Stern tube, screwshaft, propeller and sea-cocks fitted in a satisfactory manner.

Vessel is proceeding to Greenock for machinery to be put on board.

This vessel returned to Ardrossan where oil fuel installation was completed  
 The machinery of this vessel is now eligible in our opinion for notification  
 + LMC 4-21 & Fitted for oil fuel F.P. above 150°F. 4-21 as recommended in  
 Greenock 1<sup>st</sup> Entry Rpt N° 14492.

Returning from trial trip this vessel it was stated sustained damage through grounding while entering  
 Ardrossan Harbour. On examination in Dry dock, 3 blades of propeller were found damaged.  
 A new propeller was fitted, tail shaft tried for truth, crank, thrust, tunnel & tail shafts, stern tube  
 and fastenings of underwater fittings all examined & found in good order. The machinery  
 is now in as good and efficient condition as before the damage took place.

The amount of Entry Fee ... £ : : When applied for,

Special ... £ : : 14/3/1921.

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 5-5-21

Committee's Minute

GLASGOW

3-MAY 1921

J. S. Gillespie

D. C. Barr

Engineer Surveyor to Lloyd's Register of Shipping.



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Assigned + LMC 4, 21

Fitted for oil fuel 4 31 F.P. above 150°F.

Certificate (if required) to be sent to the Surveyor requested not to write on or below the space for Committee's Minute.