

Date of writing Report 1<sup>st</sup> May 1925 When handed in at Local Office 14<sup>th</sup> May 1925 Port of Aberdeen  
No. in Survey held at Aberdeen Date, First Survey 16.5.24 Last Survey 1.5.1925  
Reg. Book. on the "CHRISTINA FRASER" (Number of Visits 50)

Master                      Built at Aberdeen By whom built J. Guthrie & Co. (No. 465) Tons { Gross 717  
Engines made at Aberdeen By whom made A. Hall & Co. Ltd. (No. 289) when made 1925  
Boilers made at Aberdeen By whom made A. Hall & Co. Ltd. (No. 254) when made 1925  
Registered Horse Power                      Owners R. W. Miller Port belonging to Cydney N. S. W.  
Nom. Horse Power as per Section 28 122 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Engines, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 16½-25-41½ Length of Stroke 27 Revs. per minute 90-94 Dia. of Screw shaft 8.37 Material of Steel  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes 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 - 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 - Length of stern bush 3.1 No. of oil gland  
Dia. of Tunnel shaft 7.68 Dia. of Crank shaft journals 7.96 Dia. of Crank pin 8.5 Size of Crank webs 12.5-6 Dia. of thrust shaft under  
collars 8.5 Dia. of screw 10.3 Pitch of Screw 14.0 No. of Blades 4 State whether moveable no Total surface 37.8  
No. of Feed pumps 2 Diameter of ditto 2½ Stroke 14 Can one be overhauled while the other is at work yes  
No. of Bilge pumps 2 Diameter of ditto 2½ Stroke 14 Can one be overhauled while the other is at work yes  
No. of Donkey Engines 3 Sizes of Pumps 7.8-8 7.5-8.8 6.4-12 No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 4 C 2½ In Hold, &c. 2 C 3

No. of Bilge Injections one sizes 4½ Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 1 C 2¾  
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 none  
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 both  
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  
What pipes are carried through the bunkers Hold Suctions How are they protected Strong 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 yes worked from -

OILERS, &c.—(Letter for record 5) Manufacturers of Steel David Colville & Son Ltd.; The Park Gate Iron & Steel Co. Ltd.

Total Heating Surface of Boilers 2200 Is Forced Draft fitted no No. and Description of Boilers One Single Ended  
Working Pressure 180 lbs./sq. in. Tested by hydraulic pressure to 320 lbs./sq. in. Date of test 14.10.24 No. of Certificate 1026  
Can each boiler be worked separately yes Area of fire grate in each boiler 63 No. and Description of Safety Valves to  
each boiler two spring loaded Area of each valve 7.07 Pressure to which they are adjusted 180 lbs./sq. in. Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 7.6 Int. dia. of boilers 15.4 Length 10.6 Material of shell plates Steel  
Thickness 1½ Range of tensile strength 28/32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. Lap  
Long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1½ + 1½ Pitch of rivets 9.8 width of butt straps 19  
Per centages of strength of longitudinal joint 84.4 Working pressure of shell by rules 181 lbs./sq. in. Size of manhole in shell 19.5-15.5  
Size of compensating ring 34-30-15 No. and Description of Furnaces in each boiler 3 Brighton Material Steel Outside diameter 3.93  
Length of plain part top 1.5 bottom 1.5 Thickness of plates 1.5 Description of longitudinal joint weld No. of strengthening rings none  
Working pressure of furnace by the rules 195 lbs./sq. in. Combustion chamber plates: Material Steel Thickness: Sides 3.2 Back 1.6 Top 3.2 Bottom 3.2  
Pitch of stays to ditto: Sides 10.5-9.4 Back 10.5-9.4 Top 10.5-9.4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 lbs./sq. in.  
Material of stays Steel Thickness 1.4 Pitch of stays 20.5-21.5 How are stays secured P. nuts Working pressure by rules 190 lbs./sq. in. Material of stays Steel  
Area supported by each stay 473 Working pressure by rules 200 lbs./sq. in. Material of Front plates at bottom Steel  
Thickness 3.2 Material of Lower back plate Steel Thickness 3.2 Greatest pitch of stays 13.5-8.4 Working pressure of plate by rules 239 lbs./sq. in.  
Diameter of tubes 3.2 Pitch of tubes 4.3-4.5 Material of tube plates Steel Thickness: Front 7.8 Back 3.4 Mean pitch of stays 10.53  
Pitch across wide water spaces 14.5-9.5 Working pressures by rules 180 lbs. & 190 lbs. Girders to Chamber tops: Material Steel Depth and  
thickness of girder at centre 10-20 Length as per rule 20.5 Distance apart 10.5 Number and pitch of stays in each 20.9  
Working pressure by rules 300 lbs./sq. in. Steam dome: description of joint to shell none % 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 -

UPERHEATER. Type None 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 -

of Visits 63



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— All as per rule requirements and, in addition, Propeller and propeller, 1 set of air pump valves, 1 main and donkey feed check valve, one pair of top and bottom end brasses, air pump rod, one eccentric strap, one safety valve spring, 6 condenser tubes and 12 ferrules, 6 boiler tubes, 6 junk ring bolts and nuts, and 6 cylinder cover studs nuts.

The foregoing is a correct description,  
For ALEXANDER HALL & CO., L<sup>td</sup>

Manufacturer.

1924: MAY. 16. 28. 29. JUNE. 6. 20. 24. 25. JULY. 1. 8. 15. AUG. 1. 11. 19. 20. SEP. 3. 10. 11. 15. 17.  
OCT. 2. 6. 7. 10. 11. 13. 14. 16.  
During progress of work in shops --  
During erection on board vessel -- 1924: OCT. 20. 22. 24. 28. 30. 31. NOV. 4. 7. 11. 13. 20. 21. 24. 27. DEC. 10. 17. 18. 22. 23.  
1925: APRIL 23. 24. 28. MAY. 1.  
Total No. of visits 50

Is the approved plan of main boiler forwarded herewith yes.

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 3. 9. 24 Slides 19. 8. 24 Covers 19. 8. 24 Pistons 20. 6. 24 Rods 20. 6. 24  
Connecting rods 20. 6. 24 Crank shaft 25. 6. 24 Thrust shaft 11. 9. 24 Tunnel shafts none fitted Screw shaft 11. 9. 24 w. Propeller 11. 9. 24  
Stern tube 2. 10. 24 Steam pipes tested 28. 10. 24 Engine and boiler seatings 20. 10. 24 Engines holding down bolts 4. 11. 24

Completion of pumping arrangements 20. 11. 24 Boilers fixed 31. 10. 24 Engines tried under steam 23. 12. 24 + 23. 4.  
Completion of fitting sea connections 16. 10. 24 Stern tube 11. 10. 24 Screw shaft and propeller 16. 10. 24

Main boiler safety valves adjusted 23. 12. 24

Thickness of adjusting washers  $\frac{33}{64}$   $\frac{5}{64}$

Material of Crank shaft *Pin Journals Steel* Identification Mark on Do. *LLOYD'S N°1003 C.E.W. 25. 6. 24* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S N°1009 C.E.W. 11. 9. 24*

Material of Tunnel shafts *None* Identification Marks on Do. — Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S N°1009 C.E.W. 11. 9. 24*

Material of Steam Pipes *1/2 Copper*

Test pressure 360 lbs./sq. in.

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 no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under special survey in accordance with the rules and approved plans; the materials and workmanship are good. The machinery has been fitted on board the vessel in an efficient manner. Examined at sea under full working conditions and found satisfactory, and is eligible, in my opinion, for classification, and to have the record  $\star$  L.M.C. 5. 25 in the Register. After the trials the vessel was placed on the N°3 Pontoon, Aberdeen (24. 4. 25), and the propellers and fastenings of all sea connections examined and found satisfactory.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 5. 25. CL.

For C. E. Wilkes Self.

H. B. Forster.

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for.

Special ... £ 30 : 10 : 0 14. 5. 1925

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

Travelling Expenses (if any) £ : : 30. 6. 1925

Committee's Minute TUES. 19 MAY 1925

Assigned + L.M.C. 5. 25. C.L.



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Foundation