

REPORT ON MACHINERY.

No. 17453.

Received at London Office

THU. 22 MAY. 1919

Date of writing Report 3 May 1919 When handed in at Local Office 12 May 1919 Port of Greenock

No. in Survey held at Greenock Date, First Survey 8th June, 1917, Last Survey 10 May 1919
Reg. Book. (Number of Visits 97.)

on the Steel Steam Bergondier

Tons { Gross 5287.29
Net 3221.69
When built 1919

Master J. C. Berner; Built at Greenock By whom built Caird & Co. Ltd.

Engines made at Greenock By whom made Caird & Co. Ltd. when made 1919

Boilers made at Greenock By whom made Caird & Co. Ltd. when made 1919

Registered Horse Power Owners Lloyd Royal Belge (Great Britain), Ltd. Port belonging to London

Norm. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 27" - 44" - 75" Length of Stroke 48" Revs. per minute 77 Dia. of Screw shaft 1 1/2" Material of Steel
as per rule 14.68 as fitted 15 1/2" screw shaft

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 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 No If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 60 1/2"

Dia. of Tunnel shaft 13.33" as per rule 13.99" as fitted 13 1/2" Dia. of Crank shaft journals 14 1/2" as per rule 14 1/2" as fitted 14 1/2" Dia. of Crank pin 1 1/2" Size of Crank webs 28.9" Dia. of thrust shaft under

collars 1 1/2" Dia. of screw 17.6" Pitch of Screw 16.6" No. of Blades 4 State whether moveable No Total surface 98.2 sq ft

No. of Feed pumps Two Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 7" - 18" - 14" - 24" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room From 3 1/2" Two 3 1/2" One 3 1/2" One 3 1/2" In Holds, &c. One 3 1/2" One 3 1/2"

Circulating Pump Separate Engine
No. of Bilge Injections Two sizes 12" Connected to condenser, or to circulating pump From Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

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 Yes

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 None How are they protected None

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 Yes Is it fitted with a watertight door Yes worked from Top of Staircase

OILERS, &c.—(Letter for record S) Manufacturers of Steel Cottrell Sons & Beardmore

Total Heating Surface of Boilers 7668 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three Single Endless

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 23 May 1918 No. of Certificate 1844

Can each boiler be worked separately Yes Area of fire grate in each boiler 653 sq ft No. and Description of Safety Valves to

each boiler Two Spring Area of each valve 9.62 sq in Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 15.6" Length 11.6" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 28 - 32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Yes

long. seams all circumferential Diameter of rivet holes in long. seams 19/16" Pitch of rivets 9/16" Lap of plates or width of butt straps 19/16"

Per centages of strength of longitudinal joint rivets 88.3% Working pressure of shell by rules 182 lb Size of manhole in shell 16" - 12"

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 High Pressure Material Steel Outside diameter 50 1/2"

Length of plain part top 19 1/2" bottom 19 1/2" Thickness of plates crown 19/32" bottom 19/32" Description of longitudinal joint Welded No. of strengthening rings None

Working pressure of furnace by the rules 182 lb Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 1 1/4" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 10 1/2" Back 10 1/2" Top 10 1/2" Bottom 10 1/2" If stays are fitted with nuts or riveted heads None Working pressure by rules 180 lb

Material of stays Steel Area at smallest part 2.43 sq in Area supported by each stay 98.3 sq in Working pressure by rules 222 lb End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 21 1/4" How are stays secured With nuts Working pressure by rules 181 lb Material of stays Steel

Area at smallest part 8.29 sq in Area supported by each stay 473 sq in Working pressure by rules 182 lb Material of Front plates at bottom Steel

Thickness 3/32" Material of Lower back plate Steel Thickness 27/32" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 187 lb

Diameter of tubes 2 1/4" Pitch of tubes 4" - 3 3/8" Material of tube plates Steel Thickness: Front 5 1/32" Back 12/16" Mean pitch of stays 9.81"

Pitch across wide water spaces 13 1/2" Working pressures by rules 181 lb Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10" - 14" Length as per rule 35.56" Distance apart 105" Number and pitch of stays in each Three 9 1/2"

Working pressure by rules 187 lb Steam dome: description of joint to shell None % of strength of joint None

Diameter None Thickness of shell plates None Material None Description of longitudinal joint None Diam. of rivet holes None

Pitch of rivets None Working pressure of shell by rules None Crown plates None Thickness None How stayed None

SUPERHEATER. Type None Date of Approval of Plan None Tested by Hydraulic Pressure to None

Date of Test None Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler None

Diameter of Safety Valve None Pressure to which each is adjusted None Is Easing Gear fitted None



W12 0072

IS A DONKEY BOILER FITTED? *None*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *The top end bolts. The bottom end bolts. The main heading bolts. One set of stuffing bolts. One set of feed pump valves one set of bilge pump valves. One set main and one set donkey check valves. Sump valve. One feed pump escape valve spring. Bolts. Nuts. e. c. A. S. Piston valves.*

The foregoing is a correct description,
FOR CAIRD AND COMPANY, LIMITED,

Greenock

SECRETARY.

Manufacturer.

(1917) June 8. 22. July 2. 17. 24. 31. Aug. 2. 7. 22. 24. 28. 31. Sep. 4. 19. 26. Oct. 2. 5. 8. 18. 22. 25. Nov. 5. 9. 13. 19. 27. 30. Dec. 4. 6. 11. 18. 21. 25. (1918) Jan. 8. 11. 16. 18. 21. 25. 29. Feb. 1. 5. 7. 13. 15. 19. 21. 27. Mar. 5. 7. 11. 14. 20. 25. Apr. 1. 4. 9. 12. 16. 18. 22. 29. May 2. 6. 9. 21. 28. June 6. 10. 18. 20. 27. July 18. 23. 26. 30. Aug. 2. 19. 26. 31. 28. 29. 30. 31. (1919) Sep. 2. 11. 16. Oct. 7. 9. 15. 16. 22. 28. Nov. 8. 15. 19. 20. (1919) May: 10: -
Total No. of visits *97.*

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *7/2/18* Slides *16/4/18* Covers *7/2/18* Pistons *11/8/18* Rods *14/2/18*
Connecting rods *15/2/18* Crank shaft *15/2/18* Thrust shaft *14/2/17* Tunnel shafts *14/1/18* Screw shaft *14/1/18* Propeller *2/8/18*
Stern tube *16/9/18* Steam pipes tested at Glasgow *9/10/18* Engine and boiler seatings *9/10/18* Engines holding down bolts *9/11/18*
Completion of pumping arrangements *10/5/19* Boilers fixed *9/11/18* Engines tried under steam *9/11/18* & *10/5/19*
Completion of fitting sea connections *9/10/18* Stern tube *9/10/18* Screw shaft and propeller *9/10/18*
Main boiler safety valves adjusted *19/11/18* Thickness of adjusting washers *7/4" - 5/4" - 7/2" - 5/16" - 7/2" - 5/4"*
Material of Crank shaft *Steel* Identification Mark on Do. *262* Material of Thrust shaft *Steel* Identification Mark on Do. *262*
Material of Tunnel shafts *Steel* Identification Marks on Do. *262* Material of Screw shafts *Steel* Identification Marks on Do. *262*
Material of Steam Pipes *Iron* Test pressure *540 lb*

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. *Workmanship good.*)

The machinery and boilers of this steamer have been constructed under special survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the ratification + L.M.C. 5.19, + F.D. in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 5.19 P.D.

Recd. 23.5.19

J.W.D.
James James
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... } £ : :
Special ... } £ 146 : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *6th Feb. 1919.*
When received, *9th May 1919.*

Committee's Minute **GLASGOW 21 MAY 1919**

Assigned + L.M.C. 5.19

MACHINERY CERTIFICATE

WRITTEN *22/5/19*



© 2021

Lloyd's Register Foundation

Greenock

Certificate (if required) to be sent to

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