

REPORT ON MACHINERY.

No. 52483

Received at London Office

Date of writing Report 1912 When handed in at Local Office 1912. 13. Port of Glasgow
 No. in Survey held at Glasgow Reg. Book. Date, First Survey 31. 1. 12 Last Survey 21. 3. 1913
 97 up on the J. J. "Colusa" (Number of Visits 53)
 Master E. J. Minister RNR. Built at Port Glasgow By whom built W Hamilton & Co Tons Gross 5732 Net 3622
 Engines made at Glasgow By whom made David Rowan & Co when made 1913
 Boilers made at do. By whom made do when made 1913
 Registered Horse Power Owners New York Pacific S.S. Co. Port belonging to London
 Nom. Horse Power as per Section 28 580 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 25, 35, 51, 74 Length of Stroke 51 Revs. per minute Dia. of Screw shaft as per rule 15.1 as fitted 15.3/4 Material of screw shaft Iron
 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 5' 9"
 Dia. of Tunnel shaft as per rule 13.68 as fitted 14 Dia. of Crank shaft journals as per rule 14.35 as fitted 14 3/4 Dia. of Crank pin 1 3/4 Size of Crank webs 9 3/4 Dia. of thrust shaft under collars 15 Dia. of screw 18' 0" Pitch of Screw 18' 9" No. of Blades 4 State whether moveable No Total surface 104 #
 No. of Feed pumps 2 Diameter of ditto 10 1/2 Stroke 21 Can one be overhauled while the other is at work Yes Wins
 No. of Bilge pumps 2 Diameter of ditto 4 3/4 Stroke 30 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 8 2 1/2 x 10, 9 2 1/2 x 6, 9 5/8 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4 - 3 1/2 In Holds, &c. 2 - 3 1/2 each hold
 No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump pump 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
 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
 What pipes are carried through the bunkers For 2 Suctions How are they protected Wood covering
 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
 Dates of examination of completion of fitting of Sea Connections 9 of Stern Tube Screw shaft and Propeller S.S.R. Rpt.
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top gratings.

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel The Birminghams Co Ltd
 Total Heating Surface of Boilers 8190 Is Forced Draft fitted Yes No. and Description of Boilers Three Single Ended
 Working Pressure 220 lbs Tested by hydraulic pressure to 420 lbs Date of test 26/5/12 No. of Certificate 11735
 Can each boiler be worked separately Yes Area of fire grate in each boiler 57.3 # No. and Description of Safety Valves to each boiler Cockburn Double Area of each valve 11 # Pressure to which they are adjusted 225 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 15' 3" Length 12-10 1/2 Material of shell plates Steel
 Thickness 1 7/8 Range of tensile strength 30 to 34 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 9 R. L. long. seams 9 B. S. Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 10.5 Lap of plates or width of butt straps 2 1/4
 Per centages of strength of longitudinal joint rivets 97.2 plate 83.9 Working pressure of shell by rules 270 Size of manhole in shell 16 x 12
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 3' 10 1/8
 Length of plain part top bottom Thickness of plates crown bottom Description of longitudinal joint weld No. of strengthening rings
 Working pressure of furnace by the rules 245 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 1"
 Pitch of stays to ditto: Sides 8 3/4 x 8 3/4 Back 8 5/8 x 8 5/8 Top 8 3/4 x 8 3/4 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 264
 Material of stays steel Diameter at smallest part 2.07 Area supported by each stay 70 Working pressure by rules 265 End plates in steam space: Material steel Thickness 1 5/32 Pitch of stays 22 x 20 1/2 How are stays secured D. Nut Working pressure by rules 260 Material of stays steel
 Diameter at smallest part 1.62 Area supported by each stay 450 Working pressure by rules 240 Material of Front plates at bottom steel
 Thickness 1 1/8 Material of Lower back plate steel Thickness 1 1/8 Greatest pitch of stays 12 1/4 Working pressure of plate by rules 280
 Diameter of tubes 2 3/4 Pitch of tubes 4 Material of tube plates steel Thickness: Front 1 1/8 Back 7/8 Mean pitch of stays 10"
 Pitch across wide water spaces 1 1/4 Working pressures by rules 222 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10 3/4 x 1" x 2 Length as per rule 42 Distance apart 6 3/4 Number and pitch of stays in each 4 at 8 3/8
 Working pressure by rules 220 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

Multitubular

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. 1 Description Cylindrical Return Tube — See attached Report
Made at Glasgow By whom made Lindsay Burnett & Co. When made 1913 Where fixed Main Deck
Working pressure 120 tested by hydraulic pressure to 240 Date of test 19/4/12 No. of Certificate 11533 Fire grate area 11.5 Description of Safety
Valves Lockdowns No. of Safety Valves 2 Area of each 3.14 Pressure to which they are adjusted 120 lbs Date of adjustment 2/1/13
If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No Dia. of donkey boiler 6.6 Length 9.0
Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams
Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets
Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— Two top end bolts, 2 bottom end bolts, 2 main bearing bolts
set of coupling bolts & all with nuts, feed & bilge pump valves, assorted bolts, iron, etc.
Also propeller shaft, C.S. propeller, top & bottom end bushes, eccentric rod stop
half strap, thrust block shoe, safety valve springs, etc.
The foregoing is a correct description,

for David Rowan & Co. Manufacturer.

Dates of Survey while building: During progress of work in shops: 1912. Jan. 31. Feb. 16. Mar. 6. 8. 18. 20. 29. April 2. 11. 15. May 1. 9. 13. 21. 31. June 14. 18. 24. 27. July 2.
During erection on board vessel: Aug. 12. 15. 16. 19. 20. 26. 28. Sept. 4. 23. Oct. 1. 15. 22. Nov. 11. 13. 15. Dec. 5.
1913. Jan. 6. 10. 13. 16. 21. 25. Feb. 7. 11. 21. 27. 28. Mar. 7. 10. 17. 21.
Total No. of visits 53. Is the approved plan of main boiler forwarded herewith Yes
" " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 27/6/12 Slides 22/10/12 Covers 22/10/12 Pistons 22/10/12 Rods 22/10/12
Connecting rods 22/10/12 Crank shaft 4/9/12 Thrust shaft 15/11/12 Tunnel shafts 24/1/13 Screw shaft 15/11/12 Propeller 15/11/12
Stern tube 4/9/12 Steam pipes tested 10/3/13 Engine and boiler seatings 11/2/13 Engines holding down bolts 2/12/13
Completion of pumping arrangements 17/3/13 Boilers fixed 2/2/13 Engines tried under steam
Main boiler safety valves adjusted Thickness of adjusting washers
Material of Crank shaft steel Identification Mark on Do. H95 Material of Thrust shaft steel Identification Mark on Do. H95
Material of Tunnel shafts steel Identification Marks on Do. H95 Material of Screw shafts Iron Identification Marks on Do. H95
Material of Steam Pipes Wrought iron Test pressure 660 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The engines & boilers of this vessel have been constructed under Special Survey & are of good materials & workmanship. They have been securely fitted on board.

This vessel is in my opinion eligible for name notation LMC 3, 13 in the Register Book provided that the safety valves be adjusted & the engines tried under steam as arranged. See note attached.

It is submitted that this vessel is eligible for THE RECORD, + LMC 4.13. See telegram 3/4/13
F.D. JWD 3/4/13

The amount of Entry Fee .. £ 3 : - : When applied for, 19/3/13.
Special .. £ 49 : - :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : : When received, 22/3/13

Committee's Minute FRI. APR. 4-1913
Assigned + L.M.C. 4.13 F.D.

H. Anderson-Smith. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Certificate (if required) to be sent to Glasgow (see letter 19/3/13)

GENERAL No. PA No. PA Dou Dou Dou Dou PA Dou Dou Dou Dou PA No.

Rpt. 5. No. in Reg. Book. Description of Safety. No. of stays to do. Dia. of stays. Stayed by. Material. Descrip. Lap of plates. Rules. boiler. Description. Plates. M. Top. smallest p. Pitch of s. Area supp. lower bac. Pitch of t. water spa. nider at. Working. Separately. holes. If stiffened. Working. VERTI. Made at. Tested by h. To. of safe. After the d. Strength. Cap of pl. Radius of c. Thickness. Plates. Thickness.