

REPORT ON MACHINERY.

No. 40844

Date of writing Report 7-2-21 When handed in at Local Office 7-2-21 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 12th Sept 1919 Last Survey 3rd Feb 1921
Reg. Book. on the SS "FINOLA" (Number of Visits 54)
Master H. Banks Built at Dublin By whom built Dublin Dockyard. Shos 105 Tons } Gross
Engines made at Glasgow By whom made Ross & Duncan. Nos N^o 1075 when made 1921 Net
Boilers made at Glasgow By whom made Ross & Duncan. Nos N^o 1578/9 when made 1921
Registered Horse Power 155 Owners Michael Murphy Ltd Port belonging to Cardiff
Nom. Horse Power as per Section 28 158 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 17½" x 27½" x 45" Length of Stroke 33 Revs. per minute 99 Dia. of Screw shaft as per rule 9.65" Material of }
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes as fitted 10.36 screw shaft }
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 ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 41½"
Dia. of Tunnel shaft as per rule 8.76" Dia. of Crank shaft journals as per rule 9.16" Dia. of Crank pin 9½" Size of Crank webs 17½" x 18" Dia. of thrust shaft under collars 9½" Dia. of screw 11-6" Pitch of Screw 14-3" No. of Blades 4 State whether moveable No Total surface 45 ft²
No. of Feed pumps 2 Diameter of ditto 3 Stroke 16½" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3 Stroke 16½" Can one be overhauled while the other is at work Yes
No. of Donkey Engines Two Sizes of Pumps 7x4½" & 9x10x10 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3-2¼" diameters In Holds, &c. 2@2½"
No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 2½"
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 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 Hold Bilge Suctions How are they protected Wood casing
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 No turned Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons
Total Heating Surface of Boilers 2784 Is Forced Draft fitted No No. and Description of Boilers Two single ended multitubular
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24-3-20 No. of Certificate 15188
Can each boiler be worked separately Yes Area of fire grate in each boiler 39.54 No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 3.97 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
Smallest distance between boilers and bunkers or woodwork 4-0" Mean dia. of boilers 12-0" Length 10-6" Material of shell plates L.D.R.
Thickness 1" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.D.R.
long. seams T.R.D.S. Diameter of rivet holes in long. seams 1½" Pitch of rivets 7" Lap of plates width of butt straps 17¾"
Per centages of strength of longitudinal joint rivets 84.5 plate 83.9 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 7" x 1" No. and Description of Furnaces in each boiler 2 Corrugated Material S Outside diameter 46¼"
Length of plain part top 7" bottom 7" Thickness of plates crown 9/16" bottom 9/16" Description of longitudinal joint weld No. of strengthening rings none
Working pressure of furnace by the rules 186 Combustion chamber plates: Material S Thickness: Sides 1/16" Back 5/8" Top 1/16" Bottom 1/16"
Pitch of stays to ditto: Sides 9½" x 9" Back 8½" x 8½" Top 9½" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 186
Material of stays S Area at smallest part 2.07 Area supported by each stay 85.5 Working pressure by rules 187 End plates in steam space:
Material S Thickness 1½" Pitch of stays 17" x 16" How are stays secured S. nuts & washers Working pressure by rules 185 Material of stays S
Area at smallest part 5.15 Area supported by each stay 272 Working pressure by rules 193 Material of Front plates at bottom S
Thickness 27/32" Material of Lower back plate S Thickness 27/32" Greatest pitch of stays 14" x 8½" Working pressure of plate by rules 183
Diameter of tubes 3¼" Pitch of tubes 4½" x 4½" Material of tube plates S Thickness: Front 27/32" Back 3/4" Mean pitch of stays 9 7/8"
Pitch across wide water spaces 14" Working pressures by rules 242 Girders to Chamber tops: Material S Depth and thickness of girder at centre 7¾" x 1¾" Length as per rule 30 9/8" Distance apart 9" Number and pitch of stays in each 2@9½"
Working pressure by rules 181 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:— 1 set each of top & bottom end bolts, main bearing bolts & coupling bolts & nuts, 1 set of piston valve springs & rings, 2 feed check valves, 1 set each of air circulating feed & bilge pump valves, 1 eccentric strap, 12 junk ring bolts, 6 boiler tubes (plain) and 2 stay tubes, assorted bar iron, bolts & nuts.

The foregoing is a correct description,

Ross Duncan

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 Sep 12-24 Oct 2 6 14 20 23 27-31 Nov 4 7 11 15 20 25 Dec 2 4 11 12 17 19 23 1920 Jan 12 16 21 27 29 Feb 2 9 12 17 23 25 Mar 2 9 16 22 24 Apr 14 29 Aug 25 Oct 13 19 Nov 3 Dec 14 17 29 30 (1921) Jan 12 17 22 29
During erection on board vessel - - - Feb 1-3
Total No. of visits 54

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 2-2-20 Slides 2-2-20 Covers 17-2-20 Pistons 12-12-19 Rods 19-12-19
Connecting rods 2-2-20 Crank shaft 4-12-19 Thrust shaft 17-12-19 Tunnel shafts — Screw shaft 13-10-20 Propeller 13-10-20
Stern tube 3-11-20 Steam pipes tested 29-4-20 29-12-20 Engine and boiler seatings Dublin Rpt Engines holding down bolts 30-12-20
Completion of pumping arrangements 3-2-21 Boilers fixed 12-1-21 Engines tried under steam 13-2-21
Completion of fitting sea connections Dublin Report Stern tube Dublin Report Screw shaft and propeller Dublin Report
Main boiler safety valves adjusted 27-1-20 Thickness of adjusting washers P. P.V. 3/16" S.V. 7/32" S. P.V. 3/16" S.V. 9/32" LLOYD'S NO 1075
Material of Crank shaft S Identification Mark on Do. 4-12-19 J.E.S. Material of Thrust shaft S Identification Mark on Do. 17-12-19 J.E.S.
Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts S Identification Marks on Do. 13-10-20 J.E.S.
Material of Steam Pipes Copper — Seams Is the flash point of the oil to be used over 150° F. ✓
Is an installation fitted for burning oil fuel No
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 Boilers duplicate of same makes nos 1498

General Remarks (State quality of workmanship, opinions as to class, &c.)

These Ingers Boilers have been built under Special Survey and in accordance with the Rules; the materials and workmanship are sound and good: on They have been fitted on board in an efficient manner tried under working conditions and are eligible in my opinion to be classed with record of

L.M.C. 2-21.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 2-21.

Recd.

10/2/21 DRK

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 39 10 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 8-2-21
When received, 10-2-21

Committee's Minute

Assigned

+ L.M.C. 2,21

subject to classification of hull.

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 18 FEB. 1921

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+ L.M.C. 2,21

Lloyd's Register Foundation