

# YACHT. REPORT ON MACHINERY.

No. ~~26670~~ 26670

Port of Glasgow

Received at London Office WED. 20 MAY 1906

No. in Survey held at Paisley Date, first Survey 11<sup>th</sup> October 1907 Last Survey 15<sup>th</sup> May 1908

Reg. Book. on the Twin screw steam yacht "D. Laura"

(Number of Visits 42)

Master Built at Paisley By whom built Fleming &amp; Ferguson &amp; Co. Ltd. Tons Gross Net When built 1908

Engines made at Paisley By whom made Fleming &amp; Ferguson &amp; Co. Ltd. (373) when made 1908

Boilers made at ditto By whom made ditto when made 1908

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 226 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion (2 sets) No. of Cylinders 6 No. of Cranks 6

Dia. of Cylinders 15"-24"-39" Length of Stroke 24" Revs. per minute 150 Dia. of Screw shaft as per rule 7.99" Material of screw shaft as fitted 5"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 Protected Length of stern bush 3'-0"

Dia. of Tunnel shaft as per rule 4 1/4" Dia. of Crank shaft journals as per rule 4 1/2" Dia. of Crank pin 3 1/4" Size of Crank webs 1 1/2" Dia. of thrust shaft under

collars 7 1/2" Dia. of screw 8-3" Pitch of Screw 10-9" No. of Blades 3 State whether moveable Yes Total surface 22 1/2"

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes

No. of Donkey Engines one Sizes of Pumps 9-6-10, 8-6-18 Pair No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" In Holds, &c. Stokehold Two 2" Donkey one 2 1/4" Centre

Beamer Two 2" Donkey one 2 1/4" Centre Forehold 1-2 1/2" Fore Peak 1-2 1/4" After Hold 2 1/4"

No. of Bilge Injections 2 sizes 4" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 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 Below

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 Bilge, Ballast & Midland Steam 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

Dates of examination of completion of fitting of Sea Connections 25. 2. 08 of Stern Tube 10. 2. 08 Screw shaft and Propeller 25. 2. 08

Is the Screw Shaft Tunnel watertight Apparently Is it fitted with a watertight door Yes worked from Upper Engine Room Platform

BOILERS, &c.—(Letter for record (S(S) Manufacturers of Steel Beardmore & Gledhill & Co. Ltd.)

Total Heating Surface of Boilers 3504.84 Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 25. 2. 08 No. of Certificate 9319

Can each boiler be worked separately Yes Area of fire grate in each boiler 45.834 No. and Description of Safety Valves to

each boiler 2 Direct Spring Area of each valve 7.068 Pressure to which they are adjusted 180 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 30" Mean dia. of boilers 11-0 Length 12-0 Material of shell plates

Thickness 1 1/16 Range of tensile strength 28/32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams DR

long. seams TR-DBS Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 7 3/4 Lap of plates or width of butt straps 16 1/2

Per centages of strength of longitudinal joint rivets 89.4% Working pressure of shell by rules 214 Size of manhole in shell 16 1/2

Size of compensating ring 30" x 26" x 1 1/16 No. and Description of Furnaces in each boiler 2 Monium Material S Outside diameter 3-12 1/4

Length of plain part top bottom Thickness of plates crown bottom 9 1/16 Description of longitudinal joint weld No. of strengthening rings

Working pressure of furnace by the rules 192 Combustion chamber plates: Material S Thickness: Sides 7/8 Back 19/32 Top 7/8 Bottom 7/8

Pitch of stays to ditto: Sides 8 x 8 1/2 Back 7 1/2 x 8 1/2 Top 8 x 8 If stays are fitted with nuts or riveted heads 9 1/2 Working pressure by rules 193

Material of stays S Diameter at smallest part 2-02 Area supported by each stay 68 Working pressure by rules 182 End plates in steam space:

Material S Thickness 3 1/32 Pitch of stays 15 1/2 x 14 1/2 How are stays secured 0 9 1/2 Working pressure by rules 184 Material of stays S

Diameter at smallest part 4 5/8 Area supported by each stay 224.75 Working pressure by rules 182 Material of Front plates at bottom S

Thickness 13/16 Material of Lower back plate S Thickness 1 1/16 Greatest pitch of stays 12 (13 1/2) Working pressure of plate by rules

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates S Thickness: Front 13/16 x 9/16 Back 1 1/16 Mean pitch of stays 8 1/4

Pitch across wide water spaces 12 1/2 Working pressures by rules 200 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 6 3/4 x 1 1/16 Length as per rule 25 3/4 Distance apart 8 Number and pitch of stays in each 2 at 8"

Working pressure by rules 183 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

W1070-0230

-0232



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description		When made		Where fixed	
Made at	By whom made		Date of test		No. of Certificate	
Working pressure	tested by hydraulic pressure to		Fire grate area		Description of Safety	
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted		Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler		Length	
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		Plates
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	Stayed by				
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey			

## SPARE GEAR. State the articles supplied:—

2 Connecting Rod Bolts (top & bottom inch) 2 Main Bearing Bolts. 1 Set of Coupling Bolts, 1 Set of Feed & Pelge Pump Bolts. 1 Set Piston Ring W.O.B. 1 Crank Shaft. 1 Propeller Shaft. 1 Set of Propeller Bolts. 1 Stern tube. 1 Pair of Bolts for Connecting Rod top & bottom inch 2 Eccentric Shafts. 1 Air Pump Rod. 1 Valve Spindle.

The foregoing is a correct description,

FOR FLEMING & FERGUSON, LIMITED.

Manufacturer.

E. J. Dunlop

Dates of Survey while building	During progress of work in shops—	1907 Oct. 11. 16. 22. 24. Nov. 1. 5. 11. 19. 26. Dec. 2. 6. 12. 19. 27. 1908 Jan. 8. 10. 15. 17. 23. 29.
	During erection on board vessel—	Feb. 3. 6. 7. 10. 18. 21. 25. 26. Mar. 9. 11. 17. 24. 27. 31. Apr. 9. 11. 22. 24. May. 1. 8. 13. 15.
	Total No. of visits	142

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—	Cylinders 17.1.08	Slides 26.11.07	Covers 26.11.07	Pistons 26.11.07	Rods 26.11.07
Connecting rods 26.11.07	Crank shaft 7.2.08	Thrust shaft 7.2.08	Tunnel shafts 7.2.08	Screw shaft 7.2.08	Propeller 6.2.08
Stern tube 7.2.08	Steam pipes tested 11.4.08	Engine and boiler seatings 26.2.08	Engines holding down bolts 17.3.08		
Completion of pumping arrangements 25.3.08	Boilers fixed 17.3.08	Engines tried under steam 15.5.08			
Main boiler safety valves adjusted May 10. 1908	Thickness of adjusting washers 11.16. 11.16. 11.16. 11.16. 11.16. 11.16.				
Material of Crank shaft \$	Identification Mark on Do. W.G.M	Material of Thrust shaft \$	Identification Mark on Do. W.G.M		
Material of Tunnel shafts \$	Identification Marks on Do. ditto	Material of Screw shafts \$	Identification Marks on Do. ditto		
Material of Steam Pipes \$	3 Steel	Test pressure 540 lbs			

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

These Engines & Boilers have been constructed & fitted on board under Special Survey in accordance with the approved plan. The workmanship & material are of good quality. The machinery is in my opinion eligible for the record + LMC-5-08

It is submitted that this vessel is eligible for THE RECORD + LMC-5-08.

Electric light F.D.

The amount of Entry Fee.	£	:	:	When applied for,
Special	£	31	6	11/5/08
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	20/5/08

Committee's Minute

Glasgow

19 MAY 1908

Assigned

+ LMC 5.08

FD

Mach

W. Gordon Maclellan

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Lloyd's Register Foundation

Glasgow

Certificate (if required) to be sent to

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