

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office **TUES. 20 AUG 1907**

No. in Survey held at Glasgow Date, first Survey 7th Dec^r 05 Last Survey Aug 8th 19
Reg. Book. 1719 on the J J Strathgarry (Number of Visits 76)

Master W Hamilton & Co Ltd Built at St Glasgow By whom built W Hamilton & Co Ltd When built 1907

Engines made at Glasgow By whom made David Rowan & Co (Ld) 455 when made 1907

Boilers made at do By whom made do when made 1907

Registered Horse Power 366 Owners Burrell & Son Port belonging to Glasgow

Nom. Horse Power as per Section 28 366 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 25"-41"-68" Length of Stroke 48" Revs. per minute 14.2 Dia. of Screw shaft 14.2 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 — If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4'-10"

Dia. of Tunnel shaft 12.68 Dia. of Crank shaft journals 13.32 Dia. of Crank pin 13.78 Size of Crank webs 8 1/2" Dia. of thrust shaft under collars 14 1/4" Dia. of screw 17'-6" Pitch of Screw 17'-9" No. of Blades 4 State whether moveable no Total surface 93'

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 9x12x10, 8x5x8, 5 1/4x3 1/2x5 No. and size of Suctions connected to both Bilge and Donkey pumps 4 - 3 1/2"

In Engine Room 4 - 3 1/2" In Holds, &c. 2 - 3 1/2" each hold

No. of Bilge Injections 1 sizes 6 Connected to condenser, or to circulating pump no 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 suction 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 7 of Stern Tube 7 Screw shaft and Propeller Ingram Greenock

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top grating

BOILERS, &c.—(Letter for record (6)) Manufacturers of Steel Glyde Bridge Steel Co Ltd

Total Heating Surface of Boilers 5868 Is Forced Draft fitted no No. and Description of Boilers 3 Single Indid

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29/6/07 No. of Certificate 9019

Can each boiler be worked separately Yes Area of fire grate in each boiler 55' No. and Description of Safety Valves to each boiler 2 Cockburn Area of each valve 5.94 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork width of stokehold Mean dia. of boilers 14'-0" Length 11'-0" Material of shell plates steel

Thickness 1 3/16" Range of tensile strength 28.2-31.7 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D. R. L.

long. seams D. B. S. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 19 1/4"

Per centages of strength of longitudinal joint rivets 96.8 plate 85 Working pressure of shell by rules 188 lbs Size of manhole in shell 16 x 12

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 3'-8 1/4"

Length of plain part top 17 1/2" bottom 17 1/2" Thickness of plates crown 17 1/2" bottom 17 1/2" Description of longitudinal joint weld No. of strengthening rings —

Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 7/8" Back 7/8" Top 7/8" Bottom 7/8"

Pitch of stays to ditto: Sides 7 7/8" Back 7 7/8" Top 7 1/4 x 8 1/4" If stays are fitted with nuts or riveted heads no Working pressure by rules 218 lbs

Material of stays steel Diameter at smallest part 1.48 Area supported by each stay 62 Working pressure by rules 190 End plates in steam space: Material steel Thickness 1 1/4" Pitch of stays 18 x 18 How are stays secured D. nuts Working pressure by rules 216 lbs Material of stays steel

Diameter at smallest part 7.59 Area supported by each stay 324 Working pressure by rules 216 Material of Front plates at bottom steel

Thickness 7/8" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 13 1/4" Working pressure of plate by rules 193

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 1/2" Material of tube plates steel Thickness: Front 7/8" Back 27/32" Mean pitch of stays 9"

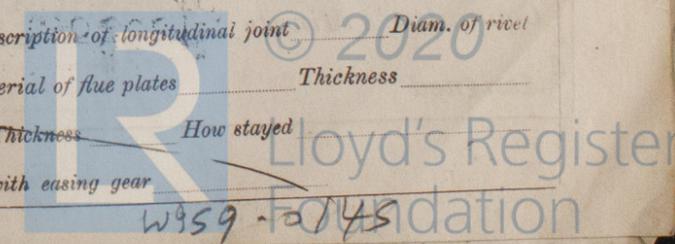
Pitch across wide water spaces 13 1/4" Working pressures by rules 180 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre (8 1/2 x 7 1/2) 2 Length as per rule 30 Distance apart 8 1/4" Number and pitch of stays in each 3 - 7 1/4"

Working pressure by rules 200 lbs 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 —



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description None
Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to Date of test No. of Certificate 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 Rivets
Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Plates
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 Stayed by
Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— Propeller shaft, propeller, set of piston rings, set of air & circulating pump valves, etc., & the bolts & nuts etc. required by the Rules.

The foregoing is a correct description, To David Rowan & Co. Manufacturer.

Table with columns: Dates, During progress of work in shops, During erection on board vessel, Total No. of visits. Includes dates from Dec 1905 to Aug 1907.

Dates of Examination of principal parts—Cylinders 30/4/07, Slides 30/4/07, Covers 30/4/07, Pistons 30/4/07, Connecting rods 30/4/07, Crank shaft 30/4/07, Thrust shaft 30/4/07, Funnel shafts 13/3/07, Screw shaft 13/3/07, Propeller 29/5/07, Stern tube 13/5/07, Steam pipes tested 30/7/07, Engine and boiler seatings 10/7/07, Engines holding down bolts 10/7/07, Completion of pumping arrangements 3/8/07, Boilers fixed 3/8/07, Engines tried under steam Aug. 8th 1907, Main boiler safety valves adjusted Aug 5th, Thickness of adjusting washers S. 5 5/16 P 5/16, C. 5 3/4 P 5/4, P 5 3/4 P 5/16, Material of Crank shaft steel, Identification Mark on Do. H65, Material of Thrust shaft steel, Identification Mark on Do. H65, Material of Tunnel shafts steel, Identification Marks on Do., Material of Screw shafts iron, Identification Marks on Do., Material of Steam Pipes Copper, Test pressure 360 lb.

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

This vessel is in my opinion eligible for notation L.M.C. 8,07 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 8.07.

Table with columns: Description, Amount, When applied for, When received. Includes Entry Fee (£ 3), Special (£ 38.6), Donkey Boiler Fee, Travelling Expenses.

H.C. 21.8.07
H. Gardner-Smith.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow 19 AUG 1907
Assigned L.M.C. 8,07.



FLAT P... GARBOA... State as thickness way of I... Bott... Write here "drinks" opposite its corresponding letter... SHIP STRA... DOUBL... Length and thickness... POOP & BRIDGE FORECASTLE... M... manuf... Plates... PLAT... CLYZ... LAN... Has t... FRAI... REVI... LOWE... Bows... Top... Rigg... Sails... EQU... Numb... Certifi... 316... 315... 315... 592... 592... Nun... Cert... 40... L... Stee... Boa... Pur... Wh... Eng... Wh... Coa... Nur... Cei... Car... Sta... Nur... Bu... The... Bu...

Thes... Signal... Off... 12... No., Dat... Whether Foreign... Bri... Number... Number... Rigg... Stern... Build... Galleri... Head... Framew... vesse... Number... Number... and... Total... at s... No. of Engines... One... Set... Unde... Clos... Sp... Po... Fo... R... O... Spa... S... I... Dec... No... Na...