

REPORT ON MACHINERY.

No. 15203.
TUES. 24 SEP 1907

Port of Greenock

Received at London Office

No. in Survey held at Greenock
Reg. Book.

Date, first Survey 28th Decr 1906 Last Survey 12th Sept 1907

(Number of Visits 49)

on the SCREW STEAMER DILDORCH.

Tons { Gross 4719.91
Net 3021.21

Master P. M. Pearson Built at Greenock By whom built Scott's S.B. & Eng Coy Ltd When built 1904

Engines made at Greenock By whom made Scott's S.B. & Eng Coy Ltd when made 1904

Boilers made at Greenock By whom made Scott's S.B. & Eng Coy Ltd when made 1904

Registered Horse Power Owners J. Reid Campbell & Wm Hobart Campbell Port belonging to Glasgow

Nom. Horse Power as per Section 28 471 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

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

Dia. of Cylinders 26 1/2 - 44 - 42 Length of Stroke 48 Revs. per minute 72 Dia. of Screw shaft 14 1/8 Material of screw shaft Steel

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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 60

Dia. of Tunnel shaft 13 1/2 Dia. of Crank shaft journals 13 1/8 Dia. of Crank pin 14 1/8 Size of Crank webs 26 1/2 x 8 1/2 Dia. of thrust shaft under collars 14 1/8 Dia. of screw 17 1/2 Pitch of Screw 17 1/2 No. of Blades 4 State whether moveable No Total surface 9259 sq ft

No. of Feed pumps 2 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes WEIR'S FEED PUMPS Yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 4 x 4 1/2 x 8 1/2, 7 x 7 x 10, 5 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Four - 3 1/2 dia In Holds, &c. No 1 Hold: 2 - 3 1/2 dia. No 2 Hold: 2 - 3 1/2 dia.

No. of Bilge Injections 1 sizes 7 Connected to condenser, or to circulating pump C. P. 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 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 None How are they protected Yes

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 13th Aug of Stern Tube Yes Screw shaft and Propeller Yes *Letter attached*

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper platform

BOILERS, &c.—(Letter for record R.) Manufacturers of Steel Stewart & Alcock

Total Heating Surface of Boilers 6694 sq ft As Forced Draft fitted Yes No. and Description of Boilers 2: Cylind¹⁰ mult: Single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 3/4/07 No. of Certificate 839

Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq ft No. and Description of Safety Valves to each boiler 2: Direct Spring Area of each valve 9.62 sq in 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 about 15 Mean dia. of boilers 16.5 Length 12.0 Material of shell plates Steel

Thickness 1 5/16 Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap Double

long. seams Double Butt Strap Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 19 1/2

Per centages of strength of longitudinal joint rivets 86.3 plate 85.3 Working pressure of shell by rules 181 lbs Size of manhole in shell 16 x 12

Size of compensating ring 38 x 30 x 1 5/16 No. and Description of Furnaces in each boiler 3: Mowson's Material Steel Outside diameter 51

Length of plain part top 4.9 Thickness of plates crown 5 bottom 8 Description of longitudinal joint Weld No. of strengthening rings None

Working pressure of furnace by the rules 194 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/8 Back 5/8 Top 3/8 Bottom 7/8

Pitch of stays to ditto Sides 1/2 x 1/2 Back 3/8 x 3/8 Top 1/2 x 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 223 lbs

Material of stays Iron Diameter at smallest part 1 1/8 Area supported by each stay 62 Working pressure by rules 244 lbs End plates in steam space: Material Steel Thickness 1 1/8 Pitch of stays 19 1/2 x 15 1/8 How are stays secured Double nuts & washers Working pressure by rules 185 lbs Material of stays Steel

Diameter at smallest part 3 1/2 Area supported by each stay 315 Working pressure by rules 213 lbs Material of Front plates at bottom Steel

Thickness 1 1/16 Material of Lower back plate Steel Thickness 1 3/16 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 186 lbs

Diameter of tubes 2 1/2 Pitch of tubes 3 5/8 x 3 5/8 Material of tube plates Steel Thickness: Front 1 1/8 Back 1 3/16 Mean pitch of stays 4 1/8

Pitch across wide water spaces 14 Working pressures by rules 232 lbs 55 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 x 1 1/2 Length as per rule 34 Distance apart 7 1/8 Number and pitch of stays in each 3: 4 1/8

Working pressure by rules 213 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes

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 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 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets 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 and shaft Slide Spindle 1 pair 2nd Bushes 1 pair 2nd End Bushes, 2 Crosshead Bolts, 2 Crank pin Bolts, 7 Main Bearing Bolts, 6 Coupling Bolts, 2 Eccentric Strap Bolts, 12 Joint Ring Bolts, 12 Boiler tubes, 24 Condenser Tubes, 1 Set Feed pump valves, 1 Set Bilge pump valves, 1 Set Circulating pump valves, 1 Air pump valves, 4 Bars White metal, 2 Safety valves spring

The foregoing is a correct description,

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY LIMITED. Manufacturer.

Table with 2 columns: Dates of Survey while building, and Dates of work in shops/erection on board vessel. Includes dates from Dec 1906 to Sep 1907.

Is the approved plan of main boiler forwarded herewith Yes. Copy. Approved plan with report by Balmain

Dates of Examination of principal parts—Cylinders 12/9/07 Slides 31/1/07 Covers 12/9/07 Pistons 31/5/07 Rods 19/3/07. Connecting rods 19/3/07. Crank shaft 4/1/07 Thrust shaft 4/6/07 Tunnel shafts 4/6/07 Screw shaft 4/6/07 Propeller 13/8/07. Stern tube 13/8/07. Steam pipes tested 21/8/07 Engine and boiler seatings 21/8/07. Engines holding down bolts 29/8/07. Completion of pumping arrangements 29/8/07. Boilers fixed 29/8/07. Engines tried under steam 12/9/07. Main boiler safety valves adjusted 29/8/07. Thickness of adjusting washers PV 3/8" SL 3/8" PV 3/8" SL 3/8" PV 3/8" SL 3/8" PV 3/8" SL 3/8". Material of Crank shaft Steel Identification Mark on Do. 485 Material of Thrust shaft Steel Identification Mark on Do. 486 Material of Tunnel shafts Steel Identification Marks on Do. 486 & 491 Material of Screw shafts Steel Identification Marks on Do. 492 Material of Steam Pipes Copper Test pressure 400 lbs sq. in.

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

The Engines and Boilers of this vessel have been built under Special Survey and the materials and workmanship are good. When completed they were examined under steam while running full power trials in the Firth and found to work satisfactorily.

The machinery throughout is now in good and efficient condition and eligible in my opinion to have the record of LMC 9,07 marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 9,07 ELEC LIGHT. F.D.

Table with 2 columns: Description of fees (Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses) and Amount (£). Includes date Glasgow 23 SEP 1907.

Committee's Minute

Assigned + LMC 9,07

MACHINERY CERTIFICATE WRITTEN 24.9.07



Lloyd's Register Foundation

Write "Ship Strake" opposite its corresponding letter.

Form No. 1B.

Certificate (if appropriate) to be sent to

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