

Date of writing Report 6 - MAR 1916 When handed in at Local Office 6 - MAR 1916 Port of DUNDEE Received at London Office TUE. 7 - MAR. 1916

No. in Survey held at Dundee Date, First Survey 24th Sept. 1915 Last Survey 4th March 1916
 Reg. Book. 24 on the MACHINERY OF THE STEEL S.S. "LADY DOROTHY" (Number of Visits 14)
 Master COLIN CAMPBELL Built at Dundee By whom built Dundee S.S. Co., Ltd. (N:274) When built 1916
 Engines made at Coatbridge By whom made Wm. Beardmore & Co., Ltd. (N:460) when made 1916
 Boilers made at Glasgow By whom made D. Rowan & Co., Ltd. (N:235) when made 1916
 Registered Horse Power 81 Owners Hotels' Explorers Co., Ltd. Port belonging to Glasgow
 Nom. Horse Power as per Section 28 81 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion Inward condensing No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13, 21 & 35" Length of Stroke 24" Revs. per minute 101 Dia. of Screw shaft as per rule Material of steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner fitted 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 3'-4"
 Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin 7" Size of Crank webs 13 3/4" x 4 1/2" Dia. of thrust shaft under
 collars 7 Dia. of screw 9'-6" Pitch of Screw 10'-6" No. of Blades 4 State whether moveable solid Total surface 34 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 3/8" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/8" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 6" & 4" BALLAST DONKEY No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 @ 2" In Holds, &c. For peak 1 @ 2 1/2", For hold 3 @ 2"
After hold 2 @ 2", and After peak 1 @ 2 1/2"
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 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 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 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 11-10-15 of Stern Tube 11-10-15 Screw shaft and Propeller 11-10-15
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform in Eng. Room

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel

Total Heating Surface of Boilers 1485 sq ft Is Forced Draft fitted no No. and Description of Boilers 1 S.E. Cylindrical Multitubular
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 29-9-15 No. of Certificate 13253
 Can each boiler be worked separately yes Area of fire grate in each boiler 51.2 sq ft No. and Description of Safety Valves to
 each boiler 2 - direct spring loaded Area of each valve 5.94 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 9" Mean dia. of boilers 13'-0" Length 10'-3" Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part Thickness of plates Description of longitudinal joint: 35496 No. of strengthening rings
 Working pressure of furnace by the rules Combustion chamber plates Material REPORT Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top It stays are fitted with nuts or riveted heads Working pressure by rules
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 Working pressure by rules Superheater or Steam chest; how connected to boiler 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. One Description Vertical Cross Tube
 Made at Goodmouth By whom made Geo. Black & Sons When made 1916 Where fixed Starboard wing of Steamer
 Working pressure 100 lb tested by hydraulic pressure to 200 lb Date of test 31-3-15 No. of Certificate 728 Fire grate area 16 Description of Safety Valves And Spring Loaded No. of Safety Valves 1 Area of each 8.29 Pressure to which they are adjusted 100 lb Date of adjustment 2-3-16
 If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no Dia. of donkey boiler 5'-6" Length 10'-9"
 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 plates 14 696 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 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:—2 top and 2 bottom end bolts and nuts; 2 main bearing bolts & nuts; 1 set coupling bolts; 1 set feed and belp pump valves; assorted bolts and nuts; iron various sizes.

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED. Manufacturer. W. J. Wilson

Dates of Survey while building { During progress of work in shops - - 1915
 { During erection on board vessel - - 1916
 Total No. of visits 14 Is the approved plan of main boiler forwarded herewith yes
 " " " donkey " " " yes

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods
 Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller
 Stern tube Steam pipes tested 19-1-16 Engine and boiler seatings 11-10-15 Engines holding down bolts 23-12-15
 Completion of pumping arrangements 2-3-16 Boilers fixed 12-1-16 Engines tried under steam 2-3-16
 Main boiler safety valves adjusted 1-3-16 Thickness of adjusting washers Port 5/16" Starboard 5/16"
 Material of Crank shaft Steel Identification Mark on Do. FAE 29-6-15 Material of Thrust shaft Steel Identification Mark on Do. FAE 3-11-15
 Material of Tunnel shafts Steel Identification Marks on Do. 3070 FAE 30-10-15 Material of Screw shafts Steel Identification Marks on Do. FAE 11-10-15
 Material of Steam Pipes Stainless Copper Test pressure 360 lb.

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

The Machinery of this vessel has now been fitted on board in accordance with the Society's Rules, examined under full working conditions and found satisfactory; and eligible, in my opinion, to have record of + LMC 3.16.

Note: For full particulars of engines and boilers see Glasgow Report Nos. 35613 and 35496, and Litch Report No. 14696.

It is submitted that this vessel is eligible for THE RECORD + LMC 3.16.

Report on Electric Lighting Installation will follow at an early date.

J. W. D. J. W. D.
8/3/16.

The amount of Entry Fee .. £ : :
 Special .. £ : :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 When applied for, .. 19 ..
 When received, .. 19 ..

Committee's Minute

Assigned

FRM MAR 17 1916
+ LMC 3.16

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



© 2020

Lloyd's Register Foundation

MACHINERY CERTIFICATE
 WRITTEN

Glasgow Office

Certificate (if required) to be sent to

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