

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office JULY 22 MAY 1906

No. in Survey held at Glasgow Date, first Survey 11th Jan Last Survey 1st May 1906
Reg. Book. on the S.S. "WHEATEAR" (Number of Visits)

Master Built at By whom built Ailsa S. B. Co Tons } Gross
Net

Engines made at Glasgow By whom made Muir & Houston Ltd. when made 1906

Boilers made at Glasgow By whom made do do when made 1906

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 24.89 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Compound - Screw No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 18", 40" Length of Stroke 27" Revs. per minute 95 Dia. of Screw shaft as per rule 8.60" as fitted 8.37" Material of screw shaft iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube none, Cedervall's 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 2' 11"
 Dia. of Tunnel shaft as per rule 7.59" as fitted none Dia. of Crank shaft journals as per rule 7.94" as fitted 8.14" Dia. of Crank pin 8 1/4" Size of Crank webs 5 1/4"th Dia. of thrust shaft under collars 8 1/4" Dia. of screw 9" 6" Pitch of Screw 12" 6" No. of Blades 4 State whether moveable no Total surface 35 sq. ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work yes.
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work yes.
 No. of Donkey Engines 2 Sizes of Pumps 7" x 7" x 8" & 6" x 4 1/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 2 1/4" dia. Duplex In Holds, &c. Two 2" dia.
 No. of Bilge Injections 1 sizes 3" 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 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 ✓
 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 before launch of Stern Tube do Screw shaft and Propeller do
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight dog ✓ worked from ✓

BOILERS, &c.—(Letter for record (5) Manufacturers of Steel Steel 6^o of Scotland
 Total Heating Surface of Boilers 1594 Is Forced Draft fitted no No. and Description of Boilers One single ended
 Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 20/3/06 No. of Certificate 8027
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 48 1/2 sq. ft No. and Description of Safety Valves to each boiler 2 Patent springs Area of each valve 6.49" Pressure to which they are adjusted 135 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 4" 6" Mean dia. of boilers 13" 0" Length 10" 6" Material of shell plates steel
 Thickness 13/16" Range of tensile strength 28 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams treble Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 17"
 Per centages of strength of longitudinal joint rivets 96.7 plate 85 Working pressure of shell by rules 130 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 3" 4"
 Length of plain part top 6" 6" bottom 5" 10 1/2" Thickness of plates crown 5" bottom 5 1/8" Description of longitudinal joint welded No. of strengthening rings 1 partial
 Working pressure of furnace by the rules 134 lbs Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 5/8"
 Pitch of stays to ditto: Sides 8 3/4" x 9" Back 9" x 9" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 135 lbs
 Material of stays steel Diameter at smallest part 1.45" Area supported by each stay 81" Working pressure by rules 143 lbs End plates in steam space: Material steel Thickness 15/16" Pitch of stays 16" x 18 1/2" How are stays secured nuts Working pressure by rules 131 lbs Material of stays steel
 Diameter at smallest part 4" 11" Area supported by each stay 296" Working pressure by rules 138 Material of Front plates at bottom steel
 Thickness 11/16" Material of Lower back plate steel Thickness 11/16" Greatest pitch of stays 12 1/2" x 9" Working pressure of plate by rules 137 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 11/16" & Back 11/16" Mean pitch of stays 9" all
 Pitch across wide water spaces 14" Working pressures by rules 182 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2-7" x 1" Length as per rule 2" 8" Distance apart 8" Number and pitch of stays in each 3-8"
 Working pressure by rules 158 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. *None* 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:— *Two top end & two bottom end connecting rod bolts, two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves. etc.*

The foregoing is a correct description,

J. W. Dimmock Manufacturer.

Dates of Survey while building

During progress of work in shops - - During erection on board vessel - - Total No. of visits	1906: <i>Jan 11, 17, 22 Feb 1, 5, 9, 15, 20, 26 Mar 2, 7, 8, 15, 20 Apr 17</i>
	<i>May 1</i>
	<i>16</i>

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts

Cylinders	Slides	Govers	donkey " "	Pistons	Rods
<i>not specifically noted</i>					

Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested *10/14/06* Engine and boiler seatings Engines holding down bolts *5/14/06*

Completion of pumping arrangements *5/14/06* Boilers fixed Engines tried under steam *1/5/06*

Main boiler safety valves adjusted *1/5/06* Thickness of adjusting washers *not taken*

Material of Crank shaft *steel* Identification Mark on Do. *see forging reports* Material of Thrust shaft *see forging reports* Identification Mark on Do.

Material of Tunnel shafts *none* Identification Marks on Do. *see forging reports* Material of Screw shafts *see forging reports* Identification Marks on Do.

Material of Steam Pipes *copper* Test pressure *26 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under special survey, the materials & workmanship are of good quality, it has been tried under steam & found to be satisfactory. In my opinion, it is eligible to be classed in the Register Book with the record of +L.M.C. 5.06*

It is submitted that this vessel is eligible for THE RECORD *H.L.M.C. 5.06 ELEC. LIGHT.*

J. W. Dimmock
23.5.06

The amount of Entry Fee.. £ *7* : - : When applied for, 21. MAY. 1906

Special .. £ *13* : *7* : When received, 21. 6. 06

Donkey Boiler Fee .. £ *13* : *7* :
 Travelling Expenses (if any) £ : :
 Committee's Minute
 Assigned *+ L.M.C. 5.06*

Glasgow 21 MAY 1906

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



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