

REPORT ON MACHINERY.

No. 23340

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Date of writing Report 13-12-12 When handed in at Local Office 17-12-12 Port of Sunderland
No. in Survey held at Alloa Date, First Survey 29 May Last Survey 13-12-1912
Reg. Book. 15 "CARRON PARK" (Number of Visits 32)
on the Master E. Jones Built at Alloa By whom built Mackay Bros & Co. Ltd. When built 1912
Engines made at Sunderland By whom made MacColl & Pollock Ltd. (Nº 236) when made 1912
Boilers made at Sunderland By whom made MacColl & Pollock Ltd. (Nº 236) when made 1912
Registered Horse Power Owners J. & G. Denholm Port belonging to Greenock
Nom. Horse Power as per Section 28 153 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 18", 29", 48" Length of Stroke 33" Revs. per minute 75 Dia. of Screw shaft as per rule 10.3 as fitted 10.2 Material of screw shaft 2. 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 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 3'-6 1/2"
Dia. of Tunnel shaft as per rule 8.95 as fitted 9.3 Dia. of Crank shaft journals as per rule 9.39 as fitted 9.58 Dia. of Crank pin 9.58 Size of Crank webs 13 1/2 x 6 3/8 Dia. of thrust shaft under
collars 9.58 Dia. of screw 13'-0" Pitch of Screw 14'-6" No. of Blades 4 State whether moveable no Total surface 62.6 sq ft
No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 14 1/2" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 14 1/2" Can one be overhauled while the other is at work yes
No. of Donkey Engines 3 Sizes of Pumps 6 1/2 x 8 1/2, 6 x 4 x 6, 4 1/2 x 2 1/2 x 4 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3 @ 2 1/4" and 1 @ 2 1/2" (separate) In Holds, &c. 1st hold, - 2 @ 2 1/4" aft. hold, 2 @ 2 1/4"
Tunnel well, - 1 @ 2 1/2" after hold well, - 1 @ 2 1/4" Dry Tank, - 1 @ 2 1/2"
No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating 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 cocks
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 8/11/12 of Stern Tube 14-11-12 Screw shaft and Propeller 14-11-12
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top platform

OILERS, &c.—(Letter for record 5) Manufacturers of Steel John Spence & Sons Ltd
Total Heating Surface of Boilers 2484 sq ft Is Forced Draft fitted no No. and Description of Boilers One single ended marine
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 7-10-12 No. of Certificate 3052
Can each boiler be worked separately Area of fire grate in each boiler 65.6 sq ft No. and Description of Safety Valves to
each boiler two direct spring Area of each valve 9.62 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes
Smallest distance between boilers on uptakes and bunkers or woodwork 13" Mean dia. of boilers 16'-3" Length 10'-9" Material of shell plates steel
Thickness 13/8 Range of tensile strength 28 1/2-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams B.S.R.
long. seams B.S.R. Diameter of rivet holes in long. seams 17/16 Pitch of rivets 9 1/2" Lap of plates on end width of butt straps 20 1/8"
Per centages of strength of longitudinal joint rivets 92.4 plate 84.8 Working pressure of shell by rules 195 Size of manhole in shell 16" x 12"
Size of compensating ring flange No. and Description of Furnaces in each boiler 3 Dighton Co. Material steel Outside diameter 4'-4"
Length of plain part top 3'-5" bottom 3'-8" Thickness of plates crown 3/8 Description of longitudinal joint welded No. of strengthening rings
Working pressure of furnace by the rules 193 Combustion chamber plates: Material steel Thickness: Sides 5/8 x 2 1/2 Back 5/8 Top 5/8 x 2 1/2 Bottom 15/16
Pitch of stays to ditto: Sides 7 1/2 x 9 1/4 Back 8 x 8 Top 8 x 8 If stays are fitted with nuts or riveted heads nuts in use Working pressure by rules 212
Material of stays steel Area at smallest part 1.450 sq in Area supported by each stay 64.0 sq in Working pressure by rules 188 & 198 End plates in steam space:
Material steel Thickness 1 1/8 Pitch of stays 17 x 15 3/8 How are stays secured DN 8 with Working pressure by rules 228 Material of stays steel
Area at smallest part 5.560 sq in Area supported by each stay 261 sq in Working pressure by rules 205 Material of Front plates at bottom steel
Thickness 7/8 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 13 5/8 x 8 Working pressure of plate by rules 183
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 13/16 Mean pitch of stays 11 1/4
Pitch across wide water spaces 14 1/4 Working pressures by rules 253 Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 2 @ 7 1/4 x 13 1/2 Length as per rule 28 1/2 Distance apart 8" Number and pitch of stays in each 2 @ 8"
Working pressure by rules 198 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 _____

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 _____ 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:— Two connecting rod top and bottom end bolts and nuts two main bearing bolts and nuts. one set of coupling bolts and nuts. one set of feed and lidge pump valves. half set of air and circulating pump valves. iron and bolts of various sizes. one propeller.

The foregoing is a correct description,
MAO COLL & POLLOCK LTD
 Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1912 May 29 Jun 3 10 18 20 Jul 2 3 10 23 31 Aug 12 13 22
 { During erection on board vessel - - - Sep 9 19 Oct 3 4 7 11 16 Nov 9 11 14 20 21 26 29 Dec 3 4 6 9 13
 Total No. of visits (32)

Is the approved plan of main boiler forwarded herewith yes
 " " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 3-7-12 Slides 22-8-12 Covers 10-7-12 Pistons 13-8-12 Rods 23-8-12
 Connecting rods 16-10-12 Crank shaft 12-6-12 Thrust shaft 23-7-12 Tunnel shafts 23-7-12 Screw shaft 16-10-12 Propeller 16-10-12
 Stern tube 16-10-12 Steam pipes tested 29-11-12 Engine and boiler seatings 8/11/12 Engines holding down bolts 26-11-12
 Completion of pumping arrangements 6-12-12 Boilers fixed 21-11-12 Engines tried under steam 4-12-12
 Main boiler safety valves adjusted 4-12-12 Thickness of adjusting washers 120th 1/2"
 Material of Crank shaft 2 Steel Identification Mark on Do. 2630HS Material of Thrust shaft 2 Steel Identification Mark on Do. 2631 H
 Material of Tunnel shafts 2 Steel Identification Marks on Do. 2610 ATP Material of Screw shafts 2 Steel Identification Marks on Do. 2609 P
 Material of Steam Pipes 2 Lapwelded Steel 10 @ 5 1/2" x 1/4" Test pressure 540 lbs per sq in

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

The materials and workmanship are good.
 The machinery has been made under special survey and is eligible in my opinion for classification and the record + LMC 12.12.

It is submitted that
 this vessel is eligible for
 THE RECORD + LMC 12.12.

JWD.
 19/12/12
 GPR

The amount of Entry Fee .. £ 2 :
 Special .. £ 22 19 :
 Donkey Boiler Fee .. £ :
 Travelling Expenses (if any) £ : 12 :

Committee's Minute

Assigned

FRI. DEC. 20. 1912

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



Lloyd's Register
 Foundation