

REPORT ON MACHINERY.

No. 25252

Received at London Office

WED. MAY 8-1912

Date of writing Report 4-5-1912 When handed in at Local Office

7.5.1912 Port of Sunderland

No. in Survey held at Sunderland Reg. Book.

Date, First Survey

24 Aug.

Last Survey

24 May 1912

New on the hulls "LIBRA".

Number of Visits

42

Gross 211

Net 89

Master Shepherson Built at Dundee

By whom built Dundee S.B. & L. S.N. 241 When built 1912

Engines made at Sunderland By whom made Macdonald & Pollock Ltd (N. 224) when made 1912

Boilers made at Sunderland By whom made Macdonald & Pollock Ltd (N. 224) when made 1912

Registered Horse Power Owners Grimsby & North Sea Steam Trawling Port belonging to Grimsby

Nom. Horse Power as per Section 28 73 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 11 3/4, 20, 34 Length of Stroke 24 Revs. per minute 105 Dia. of Screw shaft as per rule 7 1/2 as fitted 7 5/16 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 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 3-0

Dia. of Tunnel shaft as per rule 6.13 as fitted none Dia. of Crank shaft journals as per rule 6.43 as fitted 6 3/4 Dia. of Crank pin 6 3/4 Size of Crank webs 10 1/2 x 4 5/8 Dia. of thrust shaft under

collars 6 3/4 Dia. of screw 3-0 Pitch of Screw 11-3 No. of Blades 4 State whether moveable No Total surface 32 1/2

No. of Feed pumps 1 Diameter of ditto 2 3/4 Stroke 12 Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 2 3/4 Stroke 12 Can one be overhauled while the other is at work

No. of Donkey Engines 1 Sizes of Pumps 6 & 3 + 6 General donkey No and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two @ 2 In Holds, &c. Slush well, - 1 @ 2, Fish hold, - 1 @ 2

No. of Bilge Injections 1 sizes 3 Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size NO

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 valves

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

What pipes are carried through the bunkers for suction & winch pipes How are they protected wood casing

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 Dundee Rpt. 7667 of Stern Tube 17-4-12 Screw shaft and Propeller 17-4-12

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door mach. aft. worked from

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel John Spencer & Sons Ltd

Total Heating Surface of Boilers 1298 Is Forced Draft fitted No No. and Description of Boilers one single ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 13-3-12 No. of Certificate 3004

Can each boiler be worked separately Area of fire grate in each boiler 34.5 No. and Description of Safety Valves to

each boiler two direct spring Area of each valve 3.970 Pressure to which they are adjusted 180 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9 Mean dia. of boilers 12-0 Length 10-0 Material of shell plates steel

Thickness 3 1/2 Range of tensile strength 28 1/2-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams W.R.

long. seams W.B. STR Diameter of rivet holes in long. seams 1 1/6 Pitch of rivets 7 9/16 Lap of plates or width of butt straps 1-3 1/4

Per centages of strength of longitudinal joint rivets 90 plate 85.95 Working pressure of shell by rules 180 Size of manhole in shell 16 x 12

Size of compensating ring 26 x 28 x 3 1/2 No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 3-7

Length of plain part top 42 1/2 bottom 38 1/2 Thickness of plates crown 2 1/2 bottom 2 1/2 Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 181 Combustion chamber plates: Material steel Thickness: Sides 1 1/6 Back 1 1/6 Top 1 1/6 Bottom 1 1/6

Pitch of stays to ditto: Sides 9 x 9 1/8 Back 10 3/8 x 8 3/8 Top 8 1/2 x 8 3/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183

Material of stays steel Diameter at smallest part 2.030 Area supported by each stay 88.80 Working pressure by rules 205 End plates in steam space:

Material steel Thickness 1 1/6 Pitch of stays 14 x 15 1/8 How are stays secured 10 N Working pressure by rules 189 Material of stays steel

Diameter at smallest part 5.050 Area supported by each stay 265.50 Working pressure by rules 194 Material of Front plates at bottom steel

Thickness 1 1/8 Material of Lower back plate steel Thickness 1 1/8 Greatest pitch of stays 13 x 8 3/8 Working pressure of plate by rules 214

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 1 1/8 Back 1 1/6 Mean pitch of stays 11 1/4

Pitch across wide water spaces 14 x 9 1/2 Working pressures by rules 244 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 2 @ 7 x 13 Length as per rule 2-4 5/6 Distance apart 8 3/8 Number and pitch of stays in each 2 @ 8 1/2

Working pressure by rules 184 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

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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 rods top and bottom end bolts and nuts
two main bearing bolts, one set of coupling bolts, one set of feed and bilge
pump valves, iron and bolts of various sizes—

The foregoing is a correct description,

Manufacturer.

MAC GILL & POLLOCK LTD

Stuart MacCall
Managing Director

Dates	During progress of work in shops --	1911. Aug. 24. Sep. 4. 11. 13. 22. 28. Oct. 5. 10. 17. 22. 26. Nov. 6. 13. 24. 29. Dec. 4. 6. 7. 12. 13. Jan. 2. 4. 11. 16. 19. 29.
of Survey while building	During erection on board vessel ---	Feb. 1. 6. 16. 20. 27. Mar. 9. 13. 18. 25. Apr. 17. 18. 19. 24. 29. 30. May 2
	Total No. of visits	(42)

Is the approved plan of main boiler forwarded herewith ☒ yes
Approved engine room pumping plan forwarded herewith. Please return for duplicate engine room donkey " " " "

Dates of Examination of principal parts—Cylinders 22-9-11 Slides 22-10-11 Covers 22-10-11 Pistons 28-9-11 Rods 24-8-11
Connecting rods 24-8-11 Crank shaft 26-9-11 ^{15m} Thrust shaft 25-3-12 Tunnel shafts none Screw shaft 18-3-12 Propeller 18-3-12
Stern tube 9-3-12 Steam pipes tested 19-4-12 Engine and boiler seatings Dun Rpt 1766 Engines holding down bolts 29-4-12
Completion of pumping arrangements 2-5-12 Boilers fixed 24-4-12 Engines tried under steam 30-4-12
Main boiler safety valves adjusted 5.7.12 ^{one} Thickness of adjusting washers 18.6.12
Material of Crank shaft Steel Identification Mark on Do. 238 EMS Material of Thrust shaft Steel Identification Mark on Do. 2159 H.S
Material of Tunnel shafts none Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 2161 H.S
Material of Steam Pipes solid drawn copper 3 1/2" x 7ms Test pressure 400 lbs per sq. in.

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

To complete the survey the main boiler safety valves require to be overhauled and readjusted the accumulation being excessive at present. It has been arranged with the engine makers and Superintendent that this should be done at Grimsby, for which port the vessel has left. Surveyor notified.

The materials and workmanship are good.

The machinery has been made under special survey and is eligible in our opinion for classification and the record LMC (with date) when the survey is completed, as above.

10.5.12

The amount of Entry Fee	£ 1 : - :	When applied for,
Special	£ 10 : 19 :	7.5.12
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ :	15.6.12

Lewis & Davis

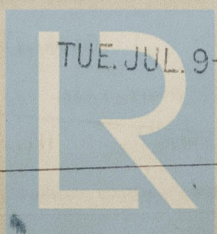
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUE MAY 21 1912

Assigned

Deferred



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