

REPORT ON MACHINERY

No. 25138
TUE. FEB. 27. 1912
SAT. FEB. 3-1912

Received at London Office

Date of writing Report 27-1-1912 When handed in at Local Office 2-1-1912 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 22 Sept. Last Survey 20th Feb 1912

New on the S/S "HOOTON".

Master J. H. Leffle Built at Middlesbrough By whom built Sir Raylton Dixon & Co. Ltd. (Number of Visits 1891.91)

Engines made at Sunderland By whom made George Clark Ltd (No 982) when made 1912

Boilers made at Sunderland By whom made George Clark Ltd (No 952) when made 1912

Registered Horse Power Owners Denaby & Co. Main Collieries Ltd Port belonging to Hull

Nom. Horse Power as per Section 28 228 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion

Dia. of Cylinders 21.34.56 Length of Stroke 36 Revs. per minute 90 No. of Cylinders 3 No. of Cranks 3

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Dia. of Screw shaft as per rule 11.5 as fitted 11.34 Material of screw shaft Iron

Is the after end of the liner made water tight 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 3-11

Dia. of Tunnel shaft as per rule 10.23 as fitted 10.4 Dia. of Crank shaft journals as per rule 10.74 as fitted 10.34 Dia. of Crank pin 10.34 Size of Crank webs 16.5 x 7 Dia. of thrust shaft under

collars 10.34 Dia. of screw 14.0 Pitch of Screw 13-6 No. of Blades 4 State whether moveable No Total surface 58.4

No. of Feed pumps 2 Diameter of ditto 2.5 Stroke 22 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3.5 Stroke 22 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 9.8 x 10.6 6.8 x 4.6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3.8 one 4" special In Holds, &c. Tunnel well - one 2.5 Forward

No. of Bilge Injections 1 sizes 6 Connected to condenser, or to circulating pump B.P. Is a separate Donkey Suction fitted in Engine room & size Yes 4"

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 20.12.11 of Stern Tube 13-1-12 Screw shaft and Propeller 13-1-12

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

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel John Spencer & Son Limited

Total Heating Surface of Boilers 3850 Is Forced Draft fitted No No. and Description of Boilers Two single ended marine

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 14-12-11 No. of Certificate 2916

Can each boiler be worked separately Yes Area of fire grate in each boiler 64.5 No. and Description of Safety Valves to

each boiler Two direct spring Area of each valve 8.950 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4-6 Mean dia. of boilers 14-10.5 Length 10-6 Material of shell plates Steel

Thickness 1.9 Range of tensile strength 29.5-33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 19R

long. seams TR. D.B.S Diameter of rivet holes in long. seams 13.16 Pitch of rivets 7.13 Lap of plates or width of butt straps 14.5

Per centages of strength of longitudinal joint rivets 92 plate 84.76 Working pressure of shell by rules 181 Size of manhole in shell 16 x 13 inside plate.

Size of compensating ring dished No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3-10.5

Length of plain part top 6-1.16 bottom 3-10 Thickness of plates crown 13.16 Description of longitudinal joint welded No. of strengthening rings one

Working pressure of furnace by the rules 183 Combustion chamber plates: Material Steel Thickness: Sides 1.16 Back 1.16 Top 1.16 Bottom 1.16

Pitch of stays to ditto: Sides 9.5 x 9.5 Back 10 x 9 Top 9.5 x 9.5 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays Steel Diameter at smallest part 2.030 Area supported by each stay 90.20 Working pressure by rules 202 End plates in steam space:

Material Steel Thickness 1.3 Pitch of stays 22.5 x 20.5 How are stays secured D.N. Working pressure by rules 180 Material of stays Steel

Diameter at smallest part 6.49 Area supported by each stay 36.50 Working pressure by rules 184 Material of Front plates at bottom Steel

Thickness 1.3 Material of Lower back plate Steel Thickness 2.9 Greatest pitch of stays 14.5 x 10.3 Working pressure of plate by rules 181

Diameter of tubes 3.4 Pitch of tubes 4.3 x 4.5 Material of tube plates Steel Thickness: Front 1.3 Back 3.4 Mean pitch of stays 9.3

Pitch across wide water spaces 14.4 Working pressures by rules 203 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 20.8 x 1.8 Length as per rule 2-10 Distance apart 9.5 Number and pitch of stays in each 2 @ 9.5

Working pressure by rules 182 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

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

2700-082M

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
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays Plates
 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:—One screw shaft (mark 4585 M.R.) one propeller, two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, One set of feed & bilge pump valves. Assorted bolts & nuts etc.

The foregoing is a correct description,

FOR GEORGE CLARK, LIMITED

Manufacturer of Engines & Boilers

FOR GEORGE CLARK, LIMITED

W. S. Bruce

Dates of Survey while building
 During progress of work in shops -- 1911 Sep 22, 26, 28, Oct. 4, 23, Nov. 8, 13, 16, 17, 23, 30, Dec. 4, 5, 11, 14, 15, 19, 24, 29
 During erection on board vessel -- 1912 Jan 4, 9, 13, 16, 17, 19, 24, 25, 26
 Total No. of visits 28 17
 Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 30-11-11 Slides 29-12-11 Covers 29-12-11 Pistons 23-11-11 Rods 30-11-11
 Connecting rods 30-11-11 Crank shaft 13-11-11 Thrust shaft 14-1-12 Tunnel shafts 29-12-11 Screw shaft 9-1-12 Propeller 11-12-11
 Stern tube 4-1-12 Steam pipes tested 19, 24-1-12 Engine and boiler seatings 3, 1, 12, Engines holding down bolts 25-1-12
 Completion of pumping arrangements 24-1-12 Boilers fixed 24-1-12 Engines tried under steam 25-1-12
 Main boiler safety valves adjusted 25-1-12 Thickness of adjusting washers Stale sh - both 7/16; Pat sh - 5/16; S 11/32

Material of Crank shaft steel Identification Mark on Do. 1052-3 18.12.11 Material of Thrust shaft steel Identification Mark on Do. 1017 MB.12.11
 Material of Tunnel shafts 1014-9 18.12.11 Identification Marks on Do. steel Material of Screw shafts Iron Identification Marks on Do. 4584 MR 64585 MA (spare)
 Material of Steam Pipes Lap welded steel Test pressure 540 lbs per square inch

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

To complete the survey the hold suction require to be fitted, the tunnel made watertight, the spare gear examined and the electric light installation fitted.

Vessel proceeding to Middlesbrough. Surveyors advised at that port.

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 2.12 (with date), when the survey is completed, as above.

The survey has now been completed as above.

It is submitted that this vessel is eligible for THE RECORD + LMC 2.12.

The amount of Entry Fee .. £ 2 : 0 :
 Special .. £ 31 : 8 :
 Donkey Boiler Fee .. £ - : - :
 Travelling Expenses (if any) £ - : - :
 When applied for, 21 1912
 When received, 28.2.1912

Committee's Minute

Assigned

TUE FEB 27 1912

+ L.M.C. 2.12

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



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