

# REPORT ON MACHINERY

No. 26459

TUE. JUN. 1-1915

Received at London Office

Date of writing Report 19 When handed in at Local Office 31 MAY 1915 Port of Sunderland.

No. in Survey held at Sunderland Date, First Survey 28 Sep 14 Last Survey 24.5.15 1915  
Reg. Book. on the S/S Spenny moor (Number of Visits 44)

Master G. Knott Built at Sland. By whom built J. Blumer & Co Tons Gross 3992 Net 2544  
Engines made at Sland. By whom made J. Dickinson & Sons L when made 1915

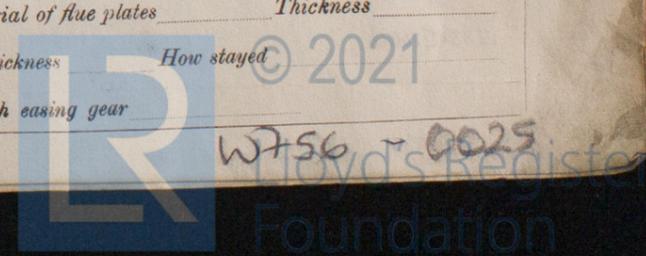
Boilers made at " By whom made " when made 1915

Registered Horse Power Owners Moor Linn & Co. Port belonging to London.

Nom. Horse Power as per Section 28 363 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no.

**ENGINES, &c.—Description of Engines** *Tri CPD* No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 25. 42. 68 Length of Stroke 45 Revs. per minute 70 Dia. of Screw shaft as per rule 14 Material of screw shaft as fitted 14.2  
 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 4.9  
 Dia. of Tunnel shaft as per rule 2.42 as fitted 12.5 Dia. of Crank shaft journals as per rule 13.08 as fitted 13.2 Dia. of Crank pin 13.4 Size of Crank webs *patent* Dia. of thrust shaft under collars 13.4 Dia. of screw 17 ft. Pitch of Screw 16.6 No. of Blades 4 State whether moveable *S* Total surface 91 sq. ft.  
 No. of Feed pumps 2 Diameter of ditto 4 Stroke 22.2 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 4.2 Stroke 22.2 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps 9, 8, 5, 6 *4 1/2* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room one Centre 3.2, two wing 3. In Holds, &c. two 3" in each tunnel 2.2  
 No. of Bilge Injections 1 sizes 5.3 Connected to condenser, or to circulating pump *CP* 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  
 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 4.5.15 of Stern Tube 5.5.15 Screw shaft and Propeller 5.5.15  
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform.

**BOILERS, &c.—(Letter for record 5)** Manufacturers of Steel *J. Spencer & Sons L.*  
 Total Heating Surface of Boilers <sup>5976</sup> 5967 Is Forced Draft fitted no No. and Description of Boilers two multitubular  
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 24.3.1915 No. of Certificate 3291  
 Can each boiler be worked separately yes Area of fire grate in each boiler 69.2 sq. ft. No. and Description of Safety Valves to each boiler two Spring Area of each valve 9.6 Pressure to which they are adjusted 185 Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 2.9 Mean dia. of boilers 17.6 Length 11.6 Material of shell plates S  
 Thickness 1.5/16 Range of tensile strength 294-33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.L long. seams J.R.D.B Diameter of rivet holes in long. seams 1.3/8 Pitch of rivets 9.2 Lap of plates or width of butt straps 1.82  
 Per centages of strength of longitudinal joint rivets 88.57 plate 85.52 Working pressure of shell by rules 180 Size of manhole in shell 16 x 12  
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 *Boiler* Material S Outside diameter 4.3  
 Length of plain part top 9 Thickness of plates crown 1.9 Description of longitudinal joint weld No. of strengthening rings  
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material S Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 7/8  
 Pitch of stays to ditto: Sides 9 x 10 Back 9.3 x 9.2 Top 9 x 10 If stays are fitted with nuts or riveted heads no Working pressure by rules 181  
 Material of stays S Diameter at smallest part 1.6 Area supported by each stay 90 Working pressure by rules 203 End plates in steam space: Material S Thickness 1.3/16 Pitch of stays 17.8 x 20.2 How are stays secured *at top* Working pressure by rules 180 Material of stays S  
 Diameter at smallest part 2.9 Area supported by each stay 366 Working pressure by rules 190 Material of Front plates at bottom S  
 Thickness 7/8 Material of Lower back plate S Thickness 29/32 Greatest pitch of stays 15 x 9.38 Working pressure of plate by rules 181  
 Diameter of tubes 3.2 Pitch of tubes 4.2 x 4.2 Material of tube plates S Thickness: Front 11/16 + 7/8 Back 7/8 Mean pitch of stays 9.2, 9.2  
 Pitch across wide water spaces 7.32 Working pressures by rules 210 Girders to Chamber tops: Material S Depth and thickness of girder at centre 6.3/8 (1 1/4 in) Length as per rule 2.6 Distance apart 10 Number and pitch of stays in each 2 @ 9  
 Working pressure by rules 183 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. \_\_\_\_\_ 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 Safe \_\_\_\_\_

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:— Propeller & propeller shaft, Slide Spindle, set of top and bottom end bolts & nuts, two main bearing bolts & nuts, set of coupling bolts, set of feed and bilge pump valves, Air & Bilge valves, assorted Iron Nuts & bolts.

The foregoing is a correct description,  
John Wilkinson & Sons, Limited.  
Manufacturers.

Dates of Survey while building	During progress of work in shops	1914 Sep 28 29 Oct 8 13 19 22 27 30 Nov 5 17 19 Dec 7 18 23 30 Jan 5 11
	During erection on board vessel	Feb 3 15 17 19 23 26 Mar 8 10 12 17 19 23 26 27 30 Apr 1 7 14 19 May 4 5 6 7 12
	Total No. of visits	14 22 24 (44)

Dates of Examination of principal parts—Cylinders 5 11 14 Slides 5 11 14 Covers 5 11 14 Pistons 5 11 14 Rods 5 11 14

Connecting rods 5 11 14 Crank shaft 19 2 15 Thrust shaft 19 2 15 Tunnel shafts 19 2 15 Screw shaft 19 2 15 Propeller 21 1 15

Stern tube 21 1 15 Steam pipes tested 4 5 15 Engine and boiler seatings 4 5 15 Engines holding down bolts 4 5 15

Completion of pumping arrangements 22 5 15 Boilers fixed 4 5 15 Engines tried under steam 12 5 15

Main boiler safety valves adjusted 12 5 15 Thickness of adjusting washers P. f. 5/16 a 3/32 B. f. 5/16 a 9/16

Material of Crank shaft S Identification Mark on Do. R. J. F. Material of Thrust shaft S Identification Mark on Do. L. F. J.

Material of Tunnel shafts S Identification Marks on Do. R. J. F. Material of Screw shafts W. S. Identification Marks on Do. R. J. F.

Material of Steam Pipes Copper Test pressure 360

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery & boilers built under Special Survey. Materials and workmanship good. Engines and boilers examined under full steam & found satisfactory. It is submitted that the record of LMC 5.15 be granted by the Committee for this vessel.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.15.

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

The amount of Entry Fee .. £ 3 : -- : When applied for, Special .. £ 38 : 3 : 31 MAY 1915 Donkey Boiler Fee .. £ 2 : 2 : When received, Travelling Expenses (if any) £ : : 3/6/15 4/6/15

J.W.D. 1/6/15  
S. J. Friday  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned + LMC 5.15



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Dates of Survey while building

GENERAL

130

good.

Survey Fee

Travelling Ex

Committee's

Assigned