

# REPORT ON MACHINERY.

No. 34278

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Writing Report 10 When handed in at Local Office 6-8-14 Port of **GLASGOW**

Survey held at **Glasgow.** Date, First Survey **7.4.14** Last Survey **13.7.14**

Book on the **S.S. Grinkle** (Hull No. **191**) (Number of Visits **10**) **1914**

er Built at **Newcastle.** By whom built **Wood Skinner & Co. 191.** When built

nes made at **Coatbridge** By whom made **W.V. Lidgerwood N<sup>o</sup> 433.** when made **1914.**

ers made at **Jarrow.** By whom made **Palmer S & D. Co. N<sup>o</sup> 773.** when made **1914.**

stered Horse Power Owners **Jarrow Tug & Light Co** Port belonging to

Horse Power as per Section 28 **38** Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **No**

ENGINES, &c.—Description of Engines **Compound** No. of Cylinders **2** No. of Cranks **2**

of Cylinders **12' x 28'** Length of Stroke **18'** Revs. per minute **58** Dia. of Screw shaft **5-8** Material of screw shaft **Iron**

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

propeller boss **Yes** If the liner is in more than one length are the joints burned **Yes** If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive **Yes** If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush **2-3"**

of Tunnel shaft as per rule **No** Dia. of Crank shaft journals as per rule **5-40"** Dia. of Crank pin **5-8"** Size of Crank webs **10-10-3-3** Dia. of thrust shaft under

s **5-8"** Dia. of screw **6-6"** Pitch of Screw **4'-0"** No. of Blades **4** State whether moveable **No** Total surface **22 sq ft**

of Feed pumps **1** Diameter of ditto **2"** Stroke **9"** Can one be overhauled while the other is at work **Yes**

of Bilge pumps **1** Diameter of ditto **2"** Stroke **9"** Can one be overhauled while the other is at work **Yes**

of Donkey Engines **one** Sizes of Pumps **4-1/2 x 4 x 2-3/4** No. and size of Suctions connected to both Bilge and Donkey pumps

ngine Room **one - 2"** In Holds, &c. **two - 2"**

Bilge Injections **1** sizes **2-1/2** Connected to condenser, or to circulating pump **Yes** Is a separate Donkey Suction fitted in Engine room & size **2"**

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 **Yes**

all connections with the sea direct on the skin of the ship **Yes** Are they Valves or Cocks **both**

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**

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**

pipes are carried through the bunkers **none** How are they protected **Yes**

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges **Yes**

of examination of completion of fitting of Sea Connections **31.7.14** of Stern Tube **31.7.14** Screw shaft and Propeller **31.7.14**

Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **Yes**

ERS, &c.—(Letter for record) Manufacturers of Steel

Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure **140.** Tested by hydraulic pressure to Date of test No. of Certificate

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

boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

least distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

ness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

th of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

working pressure of furnace by the rules Combustion chamber plates: Material Thickness Sides Back Top Bottom

of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

ness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

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

ness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

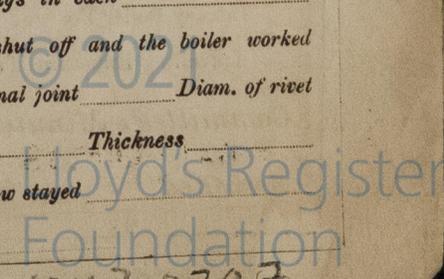
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

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

of 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

006332-006742-0207



**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 \_\_\_\_\_

Values \_\_\_\_\_ 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 \_\_\_\_\_ Rivets \_\_\_\_\_

Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ 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:— 2 Top end, 2 bottom end, 2 Main bearing & one set of coupling bolts, 1 set feed & bilge pump Valves, one Propeller Bolts & nuts assorted, and iron of sizes

The foregoing is a correct description,

LIDGERWOOD LIMITED Manufacturers per R Sneddon

Dates of Survey while building: During progress of work in shops -- 1914. Apr 7-28. May 1-11-18. June 8-11. July 10-13  
 During erection on board vessel --- at Muc: - Jul 29, 30, 31. Aug 4, 6, 10.  
 Total No. of visits 9. Muc. 6.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 28-4-14 Slides 28-4-14 Covers 28-4-14 Pistons 4-4-14 Rods 4-4-14  
 Connecting rods 7-4-14 Crank shaft 4-4-14 Thrust shaft 11-5-14 Tunnel shafts 11-5-14 Screw shaft 11-5-14 Propeller 23-5-14  
 Stern tube 10-4-14 Steam pipes tested 30-7-14 Engine and boiler seatings 29-7-14 Engines holding down bolts 6-8-14  
 Completion of pumping arrangements 10-8-14 Boilers fixed 31-7-14 Engines tried under steam 6-8-14  
 Main boiler safety valves adjusted 6-8-14 Thickness of adjusting washers Both Valves 5/16"  
 Material of Crank shaft Steel Identification Mark on Do. 3688 AMCK 4-4-14 Material of Thrust shaft Steel Identification Mark on Do.  
 Material of Tunnel shafts nil. Identification Marks on Do. Material of Screw shafts Iron. Identification Marks on Do. 3688 AMCK 4-4-14  
 Material of Steam Pipes Copper Test pressure 280 lbs

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

The materials and workmanship are good.  
 The engines have been built under special survey, and have been forwarded to Garrow to be fitted on board.  
 The Machinery of this vessel has been satisfactorily fitted on board, the Engines have been tried under steam ahead & astern & the safety valves adjusted under steam.

We are of opinion that this vessel may have the record **LMC 8.14** in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8.14

*J.P.S.*

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, 21.8.14  
 Special .. £ 5 : 13 : 0 19 Aug 1914  
 Donkey Boiler Fee .. £ : : :  
 Travelling Expenses (if any) £ RI. AUG. 21. 1914

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
*J.P. Coomber*

Committee's Minute Assigned + LMC 8.14



GLASGOW

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