

# REPORT ON MACHINERY.

No. 38323  
WED. 27 NOV. 1918

Received at London Office

Date of writing Report 19 When handed in at Local Office 10 Port of Glasgow  
No. in Survey held at Penryn Date, First Survey 20/3/16 Last Survey 20/11/18  
Reg. Book. on the Hopper Barge No. 2. (Number of Visits 42)

Master Built at Penryn By whom built Lobnitz & Co. L<sup>td</sup> (799) Tons Gross Net  
Engines made at Penryn By whom made Lobnitz & Co. L<sup>td</sup> (799) When built 1918  
Boilers made at Penryn By whom made Lobnitz & Co. L<sup>td</sup> (799) when made 1918  
Registered Horse Power Owners Port belonging to

Com. Hors. Power as per Section 28 157 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 17" 27" 43" Length of Stroke 27" Revs. per minute Dia. of Screw shaft as per rule 9" Material of screw shaft steel  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight  
Is 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  
bearers are fitted, is the shaft lapped or protected between the liners Length of stern bush 3'-0"  
Dia. of Tunnel shaft as per rule 8" Dia. of Crank shaft journals as per rule 8 1/2" Dia. of Crank pin 8 1/2" Size of Crank webs 17" x 6 1/2" Dia. of thrust shaft under  
rollers 8 1/2" Dia. of screw 10'-0" Pitch of Screw 10'-6" No. of Blades 4 State whether moveable no Total surface 60 sq ft

No. of Feed pumps 2 Diameter of ditto 4" Stroke 7 1/2" Can one be overhauled while the other is at work yes  
No. of Bilge pumps 2 Diameter of ditto 4" Stroke 7 1/2" Can one be overhauled while the other is at work yes  
No. of Donkey Engines 2 Sizes of Pumps 5 1/2" 7 1/2" x 15" No. and size of Suctions connected to both Bilge and Donkey pumps  
Engine Room 3" In Holds, &c. two 3" stokeholds.

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3"  
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 no  
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 Bilge feed tank, fuel tank, & deck discharging How are they protected steel plate covers  
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 15/10/18 of Stern Tube 15/10/18 Screw shaft and Propeller 15/10/18  
Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel Steel Coy of Scotland  
Total Heating Surface of Boilers 2992 sq ft Is Forced Draft fitted no No. and Description of Boilers two single ended  
Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 13/12/17 No. of Certificate 14019

Can each boiler be worked separately yes Area of fire grate in each boiler 47.5 sq ft No. and Description of Safety Valves to  
each boiler 2 direct spring Area of each valve 4.9 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork well clear Mean dia. of boilers 13'-0" Length 10'-0" Material of shell plates steel  
Thickness 1 3/32 Range of tensile strength 25 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams lap double  
butt seams Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 7 3/4 Lap of plates or width of butt straps 17"

Percentage of strength of longitudinal joint rivets 97.3 Working pressure of shell by rules 185 Size of manhole in shell 19 x 15"  
Size of compensating ring 3 1/2 x 27 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 3 minimum Material steel Outside diameter 40  
Length of plain part top 3 1/2 Thickness of plates crown 3 1/2 Description of longitudinal joint weld No. of strengthening rings  
Working pressure of furnace by the rules 189 Combustion chamber plates: Material steel Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 7/8"  
Pitch of stays to ditto: Sides 7 1/2 x 7 3/4 Back 7 1/2 x 7 3/4 Top 7 1/2 x 6 1/2 If stays are fitted with nuts or riveted heads no Working pressure by rules 182

Material of stays steel Diameter at smallest part 1.41 Area supported by each stay 60 sq in Working pressure by rules 188 End plates in steam space:  
Material steel Thickness 29/32 Pitch of stays 15 3/8 How are stays secured 2 1/2" nuts Working pressure by rules 207 Material of stays steel  
Diameter at smallest part 4.77 Area supported by each stay 202 sq in Working pressure by rules 245 Material of Front plates at bottom steel  
Thickness 13/16 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 13 2/8 Working pressure of plate by rules 181  
Diameter of tubes 3 1/2 Pitch of tubes 4 5/8 x 4 1/8 Material of tube plates steel Thickness: Front 1" Back 3/4 Mean pitch of stays 9 1/4"  
Pitch across wide water spaces 13 2/8 Working pressures by rules 186 Girders to Chamber tops: Material steel Depth and  
Thickness of girder at centre 6 1/2 x 7/8 double Length as per rule 29 Distance apart 6 1/2 Number and pitch of stays in each (2) 7 3/4"  
Working pressure by rules 182 Superheater or Steam chest; how connected to boiler no 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  
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 *None*  
 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:— *2 top end bolts nuts 2 bottom end bolts nuts 1 set of coupling bolts nuts 2 main bearing bolts nuts, feed & bilge pump valves, iron bolts & nuts assorted*

The foregoing is a correct description,  
 FOR LOBNITZ & CO., LIMITED,  
*F. V. Miles* Manufacturer.

Dates of Survey while building  
 During progress of work in shops - - - Director. 1916 Mar. 20. July 21. 26. Aug 8. Sept 13. 25. Oct 2. 10. 13. 19. 30 Nov 6. 9. 14. 27. Dec 4. 7. 11. 12. 22. 26  
 During erection on board vessel - - - 1917 Jan 9. Oct 25. Nov 21. 30. Dec 13. 1918 Jan 24. Feb 12. Apr 7. June 5. Sept 13. Oct 3. 9. 15. 18. 23. 29. 28. Nov 16. 19. 20  
 Total No. of visits *42* Is the approved plan of main boiler forwarded herewith No. *72998*  
*H. S. Glasgow*

Dates of Examination of principal parts—Cylinders *25/10/17* Slides *24/11/18* Covers *25/10/17* Pistons *24/11/18* Rods *24/11/18*  
 Connecting rods *12/2/18* Crank shaft *13/12/17* Thrust shaft *13/9/18* Tunnel shafts *13/9/18* Screw shaft *13/9/18* Propeller *13/9/18*  
 Stern tube *13/9/18* Steam pipes tested *1/11/18* Engine and boiler seatings *18/10/18* Engines holding down bolts *6/11/18*  
 Completion of pumping arrangements *6/11/18* Boilers fixed *6/11/18* Engines tried under steam *20/11/18*  
 Main boiler safety valves adjusted *6/11/18* Thickness of adjusting washers *Port Boiler 7/16" 5/16" S.D. Boiler 7/16" 5/16"*  
 Material of Crank shaft *Steel* Identification Mark on Do. *799 F.C.* Material of Thrust shaft *Steel* Identification Mark on Do. *AMC 12/9/18*  
 Material of Tunnel shafts *Steel* Identification Marks on Do. *AMC 12/9/18* Material of Screw shafts *Steel* Identification Marks on Do. *AMC 12/9/18*  
 Material of Steam Pipes *S.D. Copper* Test pressure *360*

General Remarks (State quality of workmanship, opinions as to class, &c. *These engines and boilers have been built under special survey, the materials and workmanship are of good description, they have been well fitted on board and tried under steam.*

*This machinery is now in our opinion eligible to have notification of + L.M.C. 11. 18 (in red) in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. H. 18

*J.W.D. 28/11/18*  
*G.P.R.*

The amount of Entry Fee	£ 2	:	:	When applied for.
Special	£ 22	:	13	26. 11. 1918.
Donkey Boiler Fee	£	:	:	When received.
Travelling Expenses (if any)	£	:	:	28. 11. 1918.

*Harry Clarke* & *A.M. McLeod*  
 Engineers/Surveyors to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **GLASGOW** 26 NOV 1918

Assigned + L.M.C. 11. 18.



Certificate (if required) to be sent to GLASGOW.

The Surveys are required not to write in or below the space for Committee's Minute.

LABINER CERTIFICATE  
 WRITTEN 27. 11. 18