

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
Reg. Book.

Penryn

Date, First Survey 20/3/16

Last Survey 20/11/1918

(Number of Visits 42)

on the Hopper Barge No. 2.

Master

Built at Penryn

By whom built Lobnitz & Co. L^d (199)

Tons Gross

When built 1918

Engines made at Penryn

By whom made Lobnitz & Co. L^d (199)

when made 1918

Boilers made at Penryn

By whom made Lobnitz & Co. L^d (199)

when made 1918

Registered Horse Power

Owners

Port belonging to

Com. Horse 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 9.08

Material of screw shaft

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

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

bearings are fitted, is the shaft lapped or protected between the liners

Length of stern bush 3'-0"

Dia. of Tunnel shaft as per rule 8.02

Dia. of Crank shaft journals as per rule 8.43

Dia. of Crank pin 8 1/2"

Size of Crank webs 7' 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' 6"

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

Size of Pumps 5 1/2" x 7 1/2" x 15"

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3' x 3'

In Holds, &c. two 3' stokeholds.

No. of Bilge Injections 1 size 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, & duct 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

MILERS, &c.—(Letter for record (S)

Manufacturers of Steel

Steel Coy of Scotland

Total Heating Surface of Boilers 2992' 6"

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' 6"

No. and Description of Safety Valves to

each boiler 2 direct spring

Area of each valve 4.9' 0"

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 28.5-32

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams lap double

ing. seams butt

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"

Percentages 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

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 1/4"

Area supported by each stay 60' 0"

Working pressure by rules 188

End plates in steam space:

Material steel

Thickness 29/32"

Pitch of stays 15 3/8 x 13 1/2"

How are stays secured 220 lbs

Working pressure by rules 220

Material of stays steel

Diameter at smallest part 4 7/8"

Area supported by each stay 202' 0"

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 3/8"

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

Pitch across wide water spaces 13 3/8"

Working pressures by rules 186

Girders to Chamber tops: Material steel

Depth and

Thickness of girder at centre 6 1/2 x 7 1/2 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

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

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. Muller 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 17. 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. 72798
H. S. Slingsby

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 6/11/16
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 7.C Material of Thrust shaft Steel Identification Mark on Do. 4704 12/9/18
Material of Tunnel shafts Steel Identification Marks on Do. 0704 12/9/18 Material of Screw shafts Steel Identification Marks on Do. 4704 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.