

REPORT ON MACHINERY.

No. 57
TUE. 28. DEC. 1915

Received at London Office

Date of writing Report 5th December 1915 When handed in at Local Office 19 Port of Cleveland, Ohio.

No. in Survey held at Detroit & Ashtabula Date, First Survey 13th July Last Survey 22nd Nov 1915
 Reg. Book. on the S.S. "Morriss Adlet" now "Tip Top" (Number of Visits 21)

Master Built at Ashtabula By whom built Great Lakes Engine Works (150) Tons 3019 Under deck
 Engines made at Detroit By whom made Great Lakes Engine Works when made 1915
 Boilers made at Toledo By whom made Marine Boiler Works when made 1915
 Registered Horse Power 1350 Owners Adlet Inc. Port belonging to Wilmington, Del.
 Nom. Horse Power as per Section 28 284 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

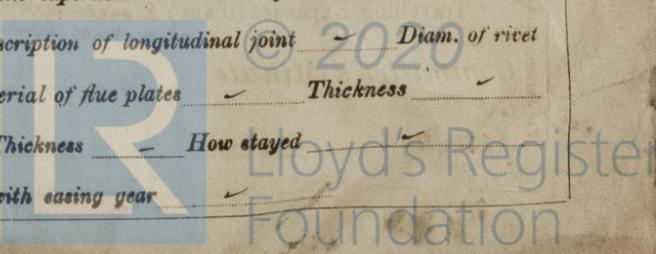
ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 21", 34 1/2", 57" Length of Stroke 42" Revs. per minute 83 Dia. of Screw shaft 11.6" Material of screw shaft Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern 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 yes 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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 4.3"
 Dia. of Tunnel shaft 10.71" Dia. of Crank shaft journals 11.34" Dia. of Crank pin 11 1/4" Size of Crank webs 8x21" Dia. of thrust shaft under collars 11 1/4" Dia. of screw 13.6" Pitch of Screw 14.5" No. of Blades 4 State whether moveable yes Total surface 64 1/2" sq
 No. of Feed pumps 2 Diameter of ditto 9x6" Stroke 10" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps 6" x 4" x 6" 10" x 12" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room & Boiler Room: 3-3" x 1 pipe. 3" In Holds, &c. no 1-2-3" no 2-2-3" no 3-2-3"
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump ump 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 yes
 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 Windlass, steam, ballast, oil How are they protected iron casing
 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 16.9.15 of Stern Tube 16.9.15 Screw shaft and Propeller 16.9.15
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel North Bros

Total Heating Surface of Boilers 4160 Is Forced Draft fitted yes No. and Description of Boilers 2 Single ended
 Working Pressure 175 lbs Tested by hydraulic pressure to 265 lbs Date of test 14.9.15 No. of Certificate 47
 Can each boiler be worked separately yes Area of fire grate in each boiler 52 sq No. and Description of Safety Valves to each boiler double spring loaded Area of each valve 11 sq Pressure to which they are adjusted 175 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean dia. of boilers 13.6" Length 11.0" Material of shell plates steel
 Thickness 1 5/32" Range of tensile strength 28/32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams S. Riv long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 7 3/4" Lap of plates or width of butt straps 1 1/2" x 1 1/2"
 Per centages of strength of longitudinal joint: rivets 84 Working pressure of shell by rules 181 Size of manhole in shell 11" x 15"
 Size of compensating ring 2.9" x 2.9" No. and Description of Furnaces in each boiler 3 Corrug Material steel Outside diameter 44 1/4"
 Length of plain part: top 17" Thickness of plates: crown 17" Description of longitudinal joint weld No. of strengthening rings — bottom 32
 Working pressure of furnace by the rules 184 Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"
 Pitch of stays to ditto: Sides 7 1/2" x 7 1/2" Back 7 1/2" x 7 1/2" Top 8" x 7 1/2" If stays are fitted with nuts or riveted heads yes Working pressure by rules 178
 Material of stays steel Diameter at smallest part 1.259 Area supported by each stay 56.25 Working pressure by rules 179 End plates in steam space: Material steel Thickness 1 1/4" Pitch of stays 16" x 16" How are stays secured D. Nuts Working pressure by rules 180 Material of stays steel Diameter at smallest part 5.4 Area supported by each stay 256 Working pressure by rules 219 Material of Front plates at bottom steel Thickness 3/4" Material of Lower back plate steel Thickness 5/8" Greatest pitch of stays 7 1/2" x 7 1/2" Working pressure of plate by rules 177
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/8" x 3 5/8" Material of tube plates steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 7 1/2"
 Pitch across wide water spaces 13 1/4" Working pressures by rules 219 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 1/4" x 2 @ 3/4" Length as per rule 2.6 1/4" Distance apart 8" Number and pitch of stays in each 3 @ 7 1/2"
 Working pressure by rules 214 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 —

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

6110-55900-14900



VERTICAL DONKEY BOILER—

Manufacturers of Steel

See attached report.

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	Date of adjustment
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler
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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
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 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes.*

Note: top end brasses secured by a wedge: one supplied.

The foregoing is a correct description,

Manufacturer. *Grath Lakes Engineering Works by H.W. Hoyle*

Dates of Survey while building	During progress of work in shops --	July 13. 14. 19. 21. 28. Aug. 2. 3. 6. 13. 24. 25 Sept 4. 10. 14. 16
	During erection on board vessel --	Sept 27 Oct. 2. 15 Nov 2. 18. 22
	Total No. of visits	21

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *None*

Dates of Examination of principal parts—Cylinders *5.8.15* Slides *5.8.15* Covers *5.8.15* Pistons *5.8.15* Rods *25.8.15*

Connecting rods *25.8.15* Crank shaft *5.8.15* Thrust shaft *25.8.15* Tunnel shafts *none* Screw shaft *3.8.15* Propeller *16.9.15*

Stern tube *16.9.15* Steam pipes tested *2.11.15* Engine and boiler seatings *16.9.15* Engines holding down bolts *2.11.15*

Completion of pumping arrangements *18.11.15* Boilers fixed *2.11.15* Engines tried under steam *18.11.15*

Main boiler safety valves adjusted *19.11.15* Thickness of adjusting washers *jam nuts fitted & no washers.*

Material of Crank shaft *Steel* Identification Mark on Do. *150* Material of Thrust shaft *Steel* Identification Mark on Do. *150*

Material of Tunnel shafts *none* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *150*

Material of Steam Pipes *Steel* Test pressure *500 lbs per sq"*

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

The machinery of this vessel has been built under special survey: the material & workmanship being good, and securely fitted aboard. The machinery was tried under steam & found satisfactory. It is submitted that above vessel be eligible for a record of + L.M.C. 11.15 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.15. F.D.

J.W.D. 25/1/16 J.M.

H. T. Thomas & Co. Surveyors
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUE. 14. MAR. 1916

The amount of Entry Fee ..	\$ 10.00	When applied for,
Special ..	\$ 171.00	When received,
Donkey Boiler Fee ..	£	
Travelling Expenses (if any) £ included with Hull Report		

Committee's Minute FRI. 28. JAN. 1916

Assigned

+ L.M.C. 11.15

F.D.

MACHINERY CERTIFICATE WRITTEN



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Lloyd's Register Foundation

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).