

## REPORT ON MACHINERY

No. 9

THU. 21 SEP. 1916

Received at London Office

Date of writing Report Augt. 9 1916 When handed in at Local Office Sept. 12 1916 Port of Detroit Mich.  
 No. in Survey held at Detroit, Mich., Toledo, Ohio Date, First Survey March 22nd Last Survey August 19 1916  
 Reg. Book, on the Stul single screw steamer "MUNISLA" (Number of Visits 14)

Master J. R. Whistler Built at Ecorse, Mich. By whom built Quat Dakes Eng. Works Tons { Gross 1697  
 Net 1144  
 Engines made at Detroit, Mich. By whom made Quat Dakes Eng. Works When built 1916  
 Boilers made at Toledo, Ohio By whom made The Marine Boiler Works Co. when made 1916

Registered Horse Power 450 Owners Hampson Steamship Line Port belonging to New York  
 Nom. Horse Power as per Section 28 140 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

## ENGINES, &amp;c.—Description of Engines

Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 16"-26 1/2"-45" Length of Stroke 33" Revs. per minute 9.78 Dia. of Screw shaft as per rule 9.78 Material of Stul  
 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  
 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 Yes Length of stern bush 3'-9 1/2"  
 Dia. of Tunnel shaft as per rule 8.36 Dia. of Crank shaft journals as per rule 8.78 Dia. of Crank pin 9" Size of Crank webs 7 1/2" x 6 1/2" Dia. of thrust shaft under  
 collars 9" Dia. of screw 11-3" Pitch of Screw 10-3" No. of Blades 4 State whether moveable Yes Total surface 45 ft  
 No. of Feed pumps 2 Diameter of ditto 9 1/2" x 10" Stroke 10" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" x 10" Stroke 10" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 2 Sizes of Pumps 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 1-4" 4 1/2" x 2 1/2" x 4" In Holds, &c. 2-6"

No. of Bilge Injections 1 size 6" Connected to condenser, or to circulating pump Pump 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 Yes  
 Are all connections with the sea direct on the skin of the ship 1 direct Are they Valves or Cocks Both  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold 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 17.5.16 of Stern Tube 17.5.16 Screw shaft and Propeller 17.5.16  
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Worth Brothers Co. Coatsville, Pa.

Total Heating Surface of Boilers 2341 ft Is Forced Draft fitted No No. and Description of Boilers 2 single ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 270 lbs Date of test 18.5.16 No. of Certificate 1  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 36 ft No. and Description of Safety Valves to  
 each boiler 2 spring loaded Area of each valve 7.06 ft Pressure to which they are adjusted 183 lbs Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 11-6" Length 11-6" Material of shell plates S  
 Thickness 1" Range of tensile strength 28.32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams P.S.R.  
 long. seams W.B.S.R. Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 8" Lap of plates or width of butt straps 13 1/2"  
 Per centages of strength of longitudinal joint 82.83 Working pressure of shell by rules 184 lbs Size of manhole in shell 11" x 15"  
 Size of compensating ring 33" x 33" No. and Description of Furnaces in each boiler 2 - wing Material S Outside diameter 50 1/2"  
 Length of plain part top Thickness of plates bottom 32 Description of longitudinal joint field No. of strengthening rings 1  
 Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material S Thickness: Sides 3/8" Back 3/8" Top 3/8" Bottom 3/8"  
 Pitch of stays to ditto: Sides 7 1/4" x 7 1/4" Back 7 1/4" x 7 1/4" Top 7 1/4" x 7 1/4" If stays are fitted with nuts or riveted heads P.F. Working pressure by rules 190 lbs  
 Material of stays S Diameter at smallest part 1-2" Area supported by each stay 32.56 ft Working pressure by rules 192 lbs End plates in steam space:  
 Material S Thickness 1" Pitch of stays 15" x 15 1/2" How are stays secured D.7 Working pressure by rules 195 lbs Material of stays S  
 Diameter at smallest part 2 1/2" Area supported by each stay 228.75 ft Working pressure by rules 222 lbs Material of Front plates at bottom S  
 Thickness 3/4" Material of Lower back plate S Thickness 1/2" Greatest pitch of stays 7 1/4" Working pressure of plate by rules 183 lbs  
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 5/8" Material of tube plates S Thickness: Front 3/4" Back 3/4" Mean pitch of stays 18 1/2"  
 Pitch across wide water spaces 4" Working pressures by rules 223 lbs Girders to Chamber tops: Material S Depth and  
 thickness of girder at centre 8 1/4" - 1 1/2" Length as per rule 29.75 Distance apart 7 1/2" Number and pitch of stays in each 3 - 7 1/4"  
 Working pressure by rules 213 lbs 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 DONKEY BOILER FITTED? No.

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

Two bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts, one set of and bilge pump washers, iron of various sizes, a quantity of assorted bolts and nuts etc., two wedges and studs for connecting rod top end.

The foregoing is a correct description,

Great Lakes Engineering Works,

Fullsdele

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - March 22, April 17, May 17, 18, 24, 25  
During erection on board vessel - - - June 10, July 13, 19, 25, Aug. 1.  
Total No. of visits 14.

Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders 17.4.16 Slides 17.4.16 Covers 17.4.16 Pistons 17.4.16 Rods 17.4.16  
Connecting rods 5.5.16 Crank shaft 17.4.16 Thrust shaft 5.5.16 Tunnel shafts ✓ Screw shaft 25.4.16 Propeller 25.4.16  
Stern tube 25.4.16 Steam pipes tested 13.7.16 Engine and boiler seatings 24.4.16 Engines holding down bolts 14.5.16  
Completion of pumping arrangements 1.8.16 Boilers fired 31.5.16 Engines tried under steam 1.8.16  
Main boiler safety valves adjusted 1.8.16 Thickness of adjusting washers PORT. F. 1 1/2" A 1 1/2" STAR. F. 1 1/2" A 1 1/2"  
Material of Crank shaft Steel Identification Mark on Do. T.4.D.1916 Material of Thrust shaft Steel Identification Mark on Do. T.4.D.1916  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. T.4.D.1916  
Material of Steam Pipes STEEL Test pressure 540 LBS. HYDRAULIC.

Is an installation fitted for burning oil fuel No.

Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case ✓

If so, state name of vessel

General Remarks

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

The engines and boilers of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound and good. The boilers tested by hydraulic pressure and with the engines secured on board and tested under steam they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of L.M.C. 8.16 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.16.

J.W.D.

J.R.R.

27/9/16

The amount of Entry Fee ... £ 10.00  
Special ... £ 105.00  
Donkey Boiler Fee ... £ 14.65  
Travelling Expenses (if any) £ 14.65

When applied for,

19

When received,

19.9.16

H. Dodd.  
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute 129-65

Assigned

See L.C. Minute 5<sup>th</sup> Oct. 1916  
+ L.M.C. 8.16

MACHINERY CERTIFICATE  
WRITTEN 2/10/16



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