

REC'D NEW YORK NOV - 7 1921

See 870 1st Entry Rpt. No. 3635

Rpt. 4.

## REPORT ON MACHINERY.

No. 161  
MON. 21 NOV. 1921

Received at London Office

Date of writing Report 13/8/21 When handed in at Local Office 19

Port of Cleveland Ohio

No. in Survey held at Hamilton Ohio  
Reg. Book.

Date, First Survey 13/5/21 Last Survey 8/8/1921

on the ENG No 4905. Hull No 166.

(Number of Visits 7

Master Built at Oakland, Cal. By whom built Moore Shipbuilding Co  
Engines made at Hamilton O By whom made Hoover Owen & Rentschler Coy when made 1921  
Boilers made at By whom made when made  
Registered Horse Power Owners Vacuum Oil Coy. Port belonging to  
Nom. H.P. Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple Expansion Vertical No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 27 1/2 x 46 x 78 Length of Stroke 51 Revs. per minute 75 Dia. of Screw shaft as per rule Material of screw shaft  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight  
in the propeller boss 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 Length of stern bush  
Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule 15.5 Dia. of Crank pin 16 1/2 Size of Crank webs 30 1/2 x 10 1/2 Dia. of thrust shaft under  
collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface  
No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
No. of Bilge pumps 2 Diameter of ditto 5 Stroke 24 Can one be overhauled while the other is at work yes  
No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size  
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible  
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate  
What pipes are carried through the bunkers How are they protected  
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges  
Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;c.—(Letter for record ) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers  
Working Pressure 220 Tested by hydraulic pressure to Date of test No. of Certificate  
Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to  
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear  
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates  
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams  
long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps  
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell  
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter  
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings  
bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom  
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules  
Material of stays Area 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  
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom  
Thickness 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  
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and  
thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each  
Working pressure by rules Steam dome: description of joint to shell % of strength of joint  
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to  
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler  
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W1006-0091



RECEIVED  
The Heeren-Owen-Reinschlag  
HAMILTON, ONT.  
AUG 22 1921  
Answered \_\_\_\_\_  
Referred to \_\_\_\_\_

IS A DONKEY BOILER FITTED? If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—  
Set of top end brasses, with bolts + nuts.  
Set of bottom end brasses, with bolts + nuts. Pair of main bearing  
parts, with bolts + nuts. Set of rings for HP LP + LP pistons.  
Set of valves for air + bilge pumps. HP + LP valve spindles complete.  
Link block + brasses. Eccentric strap. Air pump rod + bucket complete.  
Piston rod with nuts. Crank shaft section. Set of coupling bolts  
+ nuts. Follows studs for pistons. Studs for cylinders + valve chest covers.

The foregoing is a correct description,

Hootin Ostrum Reuschler Co. Manufacturer.

1921 May 13, 23. June 9, 29. July 6. Aug 2 + 8.

Dates of Survey while building	During progress of work in shops - - -	During erection on board vessel - - -	Total No. of visits
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Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	Slides	Covers	" donkey "	Pistons	Rods
13/5/21	9/6/21	9/6/21	9/6/21	6/7/21	2/8/21

Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
9/6/21	9/6/21	9/6/21			

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

Completion of pumping arrangements	Boilers fixed	Engines tried under steam

Completion of fitting sea connections	Stern tube	Screw shaft and propeller

Main boiler safety valves adjusted	Thickness of adjusting washers

Material of Crank shaft	Steel	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.
Material of Tunnel shafts		Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.
Material of Steam Pipes			Test pressure	

Is an installation fitted for burning oil fuel

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 above Engines have been built under Special Survey. The materials + workmanship employed in their manufacture, so far as can be seen, are sound + efficient.

When the Engines have been satisfactorily installed in the vessel, proved satisfactory under working conditions, + spare gear supplied as required by the Rules; this vessel will be eligible in my opinion for Record in L.M.C. (with date)

Certificate (if required) to be sent to  
The Surveyors and requested and to write on or below the space for Committee's Minute.

See 870 1st Entry Report No. 3635.

The amount of Entry Fee	...	When applied for,
2/5 L.M.C. fee to be	...	19.
Special	...	
Credited to Cleveland	...	
Donkey Boiler Fee	...	When received,
Travelling Expenses (if any)	\$82.35	19.
Accn 2 1751	\$50.00	

Committee's Minute

Assigned

New York NOV - 3 1921

See S. 70. 3635

G. Drummond.  
Engineer Surveyor to Lloyd's Register of Shipping.