

REC'D NEW YORK *July 16-1920*

*See Report E. Rpt. No. 3304
in "Vacuum" Moore's Hull 157.*

Rpt. 4.

REPORT ON MACHINERY.

No. 124

Date of writing Report *30/3/20* When handed in at Local Office *30/3/20* Port of *Cleveland Ohio* Received at London Office TUE: JUL. 6 1920

No. in Survey held at *Hamilton Ohio* Date, First Survey Last Survey 19
Reg. Book. on the *Hull No 157, ENGINE No 4721,* (Number of Visits *8*)

Master Built at By whom built When built
Hamilton Ohio *Hooven Owen Rentschler Coy* *1920*

Engines made at *Hamilton Ohio* By whom made *Hooven Owen Rentschler Coy* when made *1920*
Boilers made at By whom made when made

Registered Horse Power Owners *Vacuum Oil Coy N.Y.* Port belonging to *New York*
Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*

Dia. of Cylinders *27 1/2, 46, 78"* Length of Stroke *51"* Revs. per minute *75* Dia. of Screw shaft as per rule Material of screw shaft
as fitted

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
at 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"* Size of Crank webs *30 1/2 x 10 1/2"* Dia. of thrust shaft under
as fitted

Collars Dia. of screw Pitch of Screw No. of Blades State whether moceable 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 *2 1/2* 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
874 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

865 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, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure *220 lbs.* 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

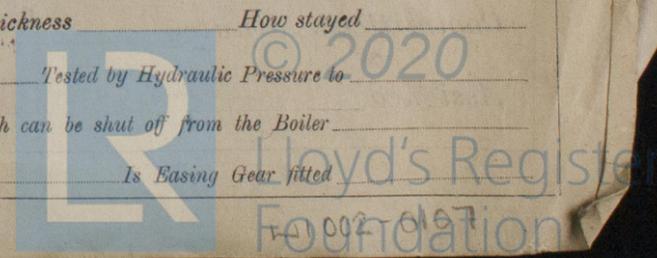
Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules Steam dome: description of joint to shell % of strength of joint

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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top, & bottom end, bolts & nuts. Two main bearing bolts & nuts. Set of connecting bolts & nuts. Set of rings for H.P. & L.P. pistons. Set of valves for air & bell pumps. Crank shaft section. Pair of top & bottom end brasses. Eccentric strap. H.P. & L.P. valve spindles. Link block & brasses. Air pump rod & bucket, valve chest & cylinder cover studs. Set of rings for H.P. & L.P. piston valves. Relief valve springs.

The foregoing is a correct description, (Engines only.)

THE HOOVEN, OWENS, RENTSCHLER CO

J. J. Hebble Asst Chief Engineer

Manufacturer.

ENG. NO 4721. - JAN 17, 29. FEB 11, 18. 26. MAR. 3, 11, 18.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 29/1/20, Slides 18/2/20, Covers 3/3/20, Pistons 18/2/20, Rods 3/3/20. Connecting rods 11/3/20, Crank shaft 26/2/20, Thrust shaft 3/3/20, Tunnel shafts, Screw shaft, Propeller. 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, 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 construction so far as can be seen are sound & good. They have been shipped to San Francisco & are intended for Hall No 157 building by the Moore Shipbuilding Corp. When the engines have been satisfactorily installed in the vessel, & proving satisfactory under working conditions, the vessel will be eligible in my opinion for Record of L.M.C. (with date.)

Certificate (if required) to be sent to

The amount of Entry Fee ... \$13 L.M.C. fee to be credited to Cleveland Special Donkey Boiler Fee ... £ Travelling Expenses (if any) \$140.00

When applied for, 30/3/1920 When received, 11/4/20 G. Drummond, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York JUN 22 1920 Assigned, See S. To Rpt 3304

Port of SA No. in Reg. Book on Bu Owners THE Yard No. 157

DESCRIPTION of Forgings Owner's No.

FORGINGS Forward 1 Sec to M. P. 2 to L. P. Fwd. 3 to L. P. Ast. 4 Astern 5 6

H. P. M. P. L. P. H. P. M. P. L. P. H. P. M. P. L. P.

Forward Astern Forward Astern

A.H. A.S. A.H. A.S. A.H. A.S. OXES APS OXES APS OXES APS

HEAD Joints in case and

Are all the joints positions, Are there any How are the