

Rpt. 4.

REPORT ON MACHINERY.

No. 161-21
MON. 21 NOV. 1921

Received at London Office

Date of writing Report 13/8/21 When handed in at Local Office 19 21 Port of Cleveland Ohio
 No. in Survey held at Hamilton Ohio Date, First Survey 13/5/21 Last Survey 8/8/1921
 Reg. Book. on the ENG No 4905. Hull No 166. (Number of Visits 7)
 Master Built at Oakland, Cal. By whom built Moore Shipbuilding Co Tons } Gross
 Engines made at Hamilton O By whom made Hoover Owen & Rentschler Coy when made 1921 } Net
 Boilers made at _____ By whom made _____ when made _____
 Registered Horse Power _____ Owners Vacuum Oil Coy. Port belonging to _____
 Nom. Hors. Power as per Section 28 _____ Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

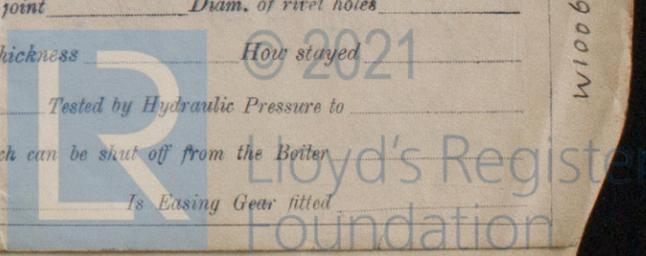
ENGINES, &c.—Description of Engines Triple Expansion Vertical No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27 1/2 x 46 x 78 Length of Stroke 51 Revs. per minute 75 Dia. of Screw shaft _____ as per rule _____ Material of screw shaft _____ as fitted _____
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube _____ Is the after end of the liner made water tight 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 movable _____ 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, &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 _____ plate _____
 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 _____

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RECEIVED
The Heery-Owens-Reischler
HAMILTON, O.H.O.
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 + SP 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,

Horton Ottens Reuschler Co. Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1921 May 13, 23. June 9, 29. July 6. Aug 2 + 8.
{ 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 13/5/21 Slides 9/6/21 Covers 9/8/21 " donkey " 6/7/21 Pistons 2/8/21 Rods 2/8/21
Connecting rods 9/6/21 Crank shaft 9/6/21 Thrust shaft 29/6/21 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 Steel Identification Mark on Do. LLOYDS 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)

The Surveyors are requested not to write on or below the space for Committee's Minute.

See S. 70 1st Entry Report No. 3635.
The amount of Entry Fee ... \$: When applied for,
2/5 L.M.C. fee to be Special ... \$: 19.
Credited to Cleveland ... \$:
Donkey Boiler Fee ... \$: When received,
Travelling Expenses (if any) \$82.35 : 19.
Accn 1751 \$50.00
Committee's Minute
Assigned

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

New York NOV - 3 1921

See S. 70. 3635



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