

Rpt. 4.

REPORT ON MACHINERY

No. 143

FRI. 25 FEB. 1921

Date of writing Report 16/10/20 When handed in at Local Office 16/10/20 Port of Cleveland Ohio
 No. in Survey held at Hamilton Ohio Date, First Survey 15/10/20 Last Survey 11/11/1920
 Reg. Book. on the ENG. No 4906 HULL No 40 (Number of Visits)

Master Built at By whom built Northwest Bridge Iron Coy. When built
 Engines made at Hamilton Ohio By whom made Hooven Owens & Rentschler Coy when made 1920
 Boilers made at By whom made when made
 Registered Horse Power Owners Port belonging to
 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, Vertical No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27 1/2", 46", 78" Length of Stroke 51" Revs. per minute 77 Dia. of Screw shaft as per rule as fitted 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 14 1/2" Dia. of Crank shaft journals as per rule 15 3/4" Dia. of Crank pin 16 1/4" Size of Crank webs 30 1/2" x 10 1/2" Dia. of thrust shaft under
 No. of rollers 16" 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, &c.—(Letter for record) Manufacturers of Steel
 Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
 Working Pressure 210 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
 plate Working pressure of shell by rules Material Outside diameter
 Size of compensating ring No. and Description of Furnaces in each boiler No. of strengthening rings
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom Thickness of plates 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 End plates in steam space:
 Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom
 Area at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
 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 end bushes, with bolts & nuts. Two main bearing bolts. Two sets of coupling bolts & nuts. Set of valves for air & bilge pumps. Set of rings for H.P., I.P., & L.P. pistons. Air pump H.P. valve stem. Set of link block brasses. Set of H.P. piston valve rings. Follows studs for pistons. Cylinder covers, & chest cover studs.

The foregoing is a correct description,

? Feed pump valves

Hoover Owen Rentschle Co.

Manufacturer.

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

1920 Oct. 15, 26. Nov. 11

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 15/10/20 Slides 11/11/20 Covers 11/11/20 Pistons 11/11/20 Rods 11/11/20
Connecting rods 15/10/20 Crank shaft 26/10/20 Thrust shaft 11/11/20 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 Steel Identification Mark on Do. LLOYDS Material of Thrust shaft Steel 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 & L.M.C. (with date)

The amount of Entry Fee ... \$134.75
Special ...
Donkey Boiler Fee ...
Travelling Expenses (if any) ... \$124.75

When applied for,

19

When received,

11/11/21

G. Drummond

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York FEB - 8 1921

Assigned

See P.O. Rpt 615



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