

Rpt. 4.

REPORT ON MACHINERY.

No. 150

Date of writing Report 24/2/21 When handed in at Local Office 24/2/21 Port of Cleveland Ohio Received at London Office WED MAY 11 1921
No. in Survey held at Hamilton Ohio Date, First Survey 18th Dec. 1920 Last Survey 23rd Feb 1921
Reg. Book. on the ENG. No 4909. HULL No 43 (Number of Visits)

Master _____ Built at Portland Oreg. By whom built Northwest B. & O. Coy. Tons { Gross _____ Net _____
Engines made at Hamilton O. By whom made Horven Owens & Rentschler Coy. when made 1921 When built _____

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" x 46" x 78" Length of Stroke 51 Revs. per minute 77 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 14.6" Dia. of Crank shaft journals _____ as per rule 15.3" Dia. of Crank pin 16 1/4" Size of Crank webs 30 1/2" x 10 1/4" Dia. of thrust shaft under _____ as fitted 16" collars 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# 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 _____ 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 _____

UPERHEATER. 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 _____

W272-0099

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 bottom end bushes, with bolts + nuts. Two main bearing bolts + nuts. 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 rod. H.P. valve stem. Set of link block brasses. Set of H.P. piston valve rings. Follows studs for pistons. Cylinder covers + valve chest cover studs.

The foregoing is a correct description,

Hooven Oruns Preusschlag & Co. Manufacturers.

Dates of Survey while building { During progress of work in shops -- 1920 18 Dec. 1921 4 Jan. 18 Jan. 25 Jan. 8 Feb. 15 Feb. 23 Feb. 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 4/1/21 18/1/21 25/1/21 Slides 4/1/21 15/2/21 Covers 15/2/21 Pistons 4/1/21 15/2/21 Rods 4/1/21 15/2/21 Connecting rods 15/2/21 Crank shaft 15/2/21 Thrust shaft 23/2/21 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 Steel Identification Mark on Do. LLOYDS 3643 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)

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... \$: : When applied for, 19...
Special ... \$: :
Donkey Boiler Fee ... \$: :
Travelling Expenses (if any) \$ 89 : 90 : : When received, 19...

G. Hammond.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York. APR 19 1921

Assigned.

See P.O. Rpt 626



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Foundation