

REC'D NEW YORK FEB 17 1921

REC'D NEW YORK AUG -6 1921

See S/S 1st. E. Mach. Rpt. No. 3575.

Rpt. 4.

REPORT ON MACHINERY.

No. 148

Date of writing Report Feb. 10th 1921 When handed in at Local Office Feb. 10th 1921 Port of Cleveland Ohio
No. in Survey held at Hamilton Ohio Date, First Survey Dec 18th Last Survey Feb. 8th 1921
Reg. Book. on the ENG. No 4956. HULL No 24 (Number of Visits)

Master _____ Built at _____ By whom built Southern Shipbuilding Co Tons } Gross
Engines made at Hamilton Ohio By whom made Hoover Owens & Kenton Co When built 1921 } Net
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"-45"-74" Length of Stroke 48" Revs. per minute 80 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 27 1/2" + 29"
Dia. of Tunnel shaft as per rule 13.3 Dia. of Crank shaft journals as per rule 14" Dia. of Crank pin 14 1/2" Size of Crank webs x 9 1/2" Dia. of thrust shaft under collars 14 1/2" 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 4" Stroke 26" 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 180 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 _____

W1329-0150

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. Six Coupling bolts & nuts. Set of valves for air & bilge pumps. Set of springs, & rings, for H.P. I.P. & L.P. pistons. Valve stem, link block, braces & eccentric strap, complete. Air pump rod & bilge pump plungers. Guide shoe. $\frac{1}{3}$ Length of crank shaft. Follows studs & nuts, for pistons & stuffing boxes.

The foregoing is a correct description,

Howden & Co. Ltd. by Agree Manufacturer.

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

1920 Dec 18 1921 Jan 3, 4, 16, 17, 25, Feb 8.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 18/12/20 Slides 16/1/21 Covers 14/1/21 " donkey " 3/1/21 " 3/1/21
Connecting rods 18/12/20 Crank shaft 3/1/21 Thrust shaft 8/2/21 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
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 were built under Special Survey. The materials & workmanship employed in their manufacture, so far as can be seen, are sound & efficient. When they 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 to have the Record of F.L.M.C. (with date)

The amount of Entry Fee ... \$ 25.00
Special ... \$ 1.00
Donkey Boiler Fee ... \$ 1.00
Travelling Expenses (if any) ... \$ 139.15
When applied for, 19
When received, 19

Committee's Minute New York AUG - 9 1921

Assigned See S.F. 3575

G. Drummond

Engineer Surveyor to Lloyd's Register of Shipping.

TUE. NOV. 11 1921 2021

Lloyd's Register Foundation