

Rpt. 4.

REPORT ON MACHINERY

No. 153

FRI. 10 JUN. 1921

Date of writing Report 6/3/21 When handed in at Local Office 6/3/21 Port of Cleveland Ohio  
No. in Survey held at Hamilton Ohio Date, First Survey 15/2/21 Last Survey 24/3/1921  
Reg. Book. on the ENG. NO 4910 HULL NO 44

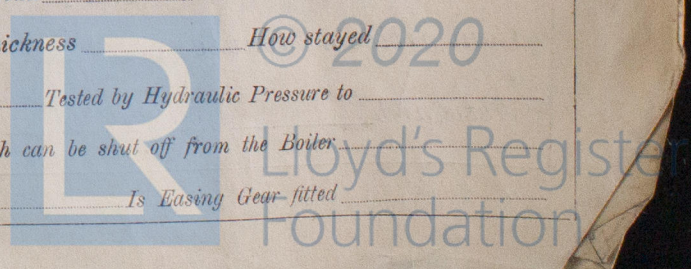
Master Built at Portland Oreg. By whom built Northwest Bridge Iron  
Engines made at Hamilton Ohio By whom made Horven Owens & Rentschler Co when made 1921  
Boilers made at By whom made when made  
Registered Horse Power Owners Port belonging to  
Nom. Horse Power as per Section 28 Is Refrigerating 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 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 14.6 Dia. of Crank shaft journals as per rule 15.3 Dia. of Crank pin 16 1/4" Size of Crank webs 30"x16 1/2" Dia. of thrust shaft under  
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 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  
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

W589-0210





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 HP. IP + LP pistons. Air pump rod. HP valve stem. Set of link block braces. Set of HP piston valve rings. Follower studs for pistons. Cylinder cover + valve chest cover studs.

The foregoing is a correct description,

*Harriet Steyer* Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1921 March 24, 17, 10 Feb. 23, 15.  
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 24/3/21 17/3/21 Slides 24/3/21 17/3/21 Covers 24/3/21 17/3/21 Pistons 17/3/21 15/3/21 Rods 17/3/21 15/3/21  
Connecting rods 15/3/21 Crank shaft 15/3/21 Thrust shaft 24/3/21 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 have been built under Special Survey. The materials + workmanship used in their construction, 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 for Record of L.M.C. (with date)

Certificate (if required) to be sent to

The amount of Entry Fee ... \$ : : When applied for,  
2/5 LMC fee to be Special ... \$ : :  
Donkey Boiler Fee ... \$ : :  
Travelling Expenses (if any) \$ 76 : 90 : :  
When received ... \$ : :  
Entered on file ... \$ : :

G. Drummond

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York

MAY 24 1921

Assigned

See PO Rpt 632



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