

Rpt. 4.

REPORT ON MACHINERY.

No. 51

REC'D NEW YORK

Aug. 6. 1917

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Date of writing Report Sept 27 1917 When handed in at Local OfficePort of Detroit, Mich.No. in Survey held at DetroitDate, First Survey May 24 1917 Last Survey Sept 21 1917

Reg. Book.

(Number of Visits)

on the Single Screw steel steamer "Warrant"Gross 2044.56Tons Net 1258.00Master Chas. S. Hill Built at Superior, Wis. By whom built Superior Shipbuilding Co. When built 1917Engines made at Detroit, Mich. By whom made Detroit S. B. Co. (Engines No 1240) when made 1917Boilers made at Lorain, Ohio By whom made American Shipbuilding Co. when made 12/6/17

Registered Horse Power

Owners Burnard Steamship Co. Port belonging to LondonNom. Horse Power as per Section 28 274Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted YES

ENGINES, &c.—Description of Engines

Triple ExpansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 20" x 33" x 54" Length of Stroke 40 Revs. per minute 80 to 100 Dia. of Screw shaft as per rule 11 1/2" Material of as fitted 11 1/4" screw shaft SteelIs the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tightin the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If twoliners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4'-3"Dia. of Tunnel shaft as per rule 10.30 Dia. of Crank shaft journals as per rule 10.815" Dia. of Crank pin 11" Size of Crank webs 21x7" Dia. of thrust shaft undercollars 11" Dia. of screw 12'-6" Pitch of Screw 13'-3" No. of Blades 4 State whether moveable No Total surface 60 sq ftNo. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work YesNo. of Donkey Engines 3 Sizes of Pumps 10-12 x 12, 10-6 x 10, 12-8 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps.In Engine Room One 6" and 4'-3" In Holds, &c. 4'-3"No. of Bilge Injections One sizes 6" Connected to condenser to circulating pump YES Is a separate Donkey Suction fitted in Engine room & size YES 3"Are all the bilge suction pipes fitted with roses YES Are the roses in Engine room always accessible YES Are the sluices on Engine room bulkheads always accessible YesAre all connections with the sea direct on the skin of the ship YES Are they Valves or Cocks CocksAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Discharge Pipes above or below the deep water line aboveAre they each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YESWhat pipes are carried through the bunkers air How are they protected Steel CoveringAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YESAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YES, all check valvesIs the Screw Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from Main Deck

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel

Total Heating Surface of Boilers 5060 sq ft Is Forced Draft fitted no No. and Description of Boilers 2 S. B.Working Pressure 180 lb Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____Can each boiler be worked separately _____ Area of fire grate in each boiler 63 sq ft 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 _____ 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 _____ Description of longitudinal joint _____ No. of strengthening rings _____

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 _____

W1236-0163

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 connecting rod top end b lts and nuts, 2 connecting rod bottom end bolts and nuts, 2 main bearing bolts, 1 set coupling bolts, 1 set feed and bilge pump valves, 1 set piston springs, 1 quantity of assorted bolts and nuts, Iron of various sizes, and the following additions:— 10 gauge glasses for main boiler, 1 set air pump valves, 1 set feed pump valves, 4 patent stays for main boiler, 1 spare propeller, 25 condenser pipe tubes, 12 boiler tubes.

The foregoing is a correct description,

Detwilt Shipbuilding Co. Grant Jeffrey & Co. Manufacturer.

Dates of Survey while building: During progress of work in shops -- May 24-28-31, 1917. During erection on board vessel -- June 4-6-8-15-19-21-25-28. July 3-7-10-13-17-19-24-27. Aug 1st. Total No. of visits: Aug 6, 12, 13, 14, 21, 22, 23, 24, 25, 27, 28, 29, 30 Sept 5, 6, 7, 12 1917. During erection 21. Is the approved plan of main boiler forwarded herewith?

Dates of Examination of principal parts: Cylinders 7-7-17 Slides 27-7-17 Covers 27-7-17 Pistons 27-7-17 Rods 1-8-17 Connecting rods 17-7-17 Crank shaft 27-7-17 Thrust shaft 27-7-17 Tunnel shafts 7-7-17 Screw shaft 13-7-17 Propeller 13-7-17 Stern tube 19/7/17 Steam pipes tested 19/7/17 Engine and boiler seatings 19/7/17 Engines holding down bolts 25/8/17 Completion of pumping arrangements 21/9/17 Boilers fixed 17/7/17 Engines tried under steam 15/9/17 Completion of fitting sea connections 4/8/17 Stern tube 4/8/17 Screw shaft and propeller 4/8/17 Main boiler safety valves adjusted 21/9/17 Thickness of adjusting washers LLOYDS Identification Mark on Do. N° 47 JES. Material of Crank shaft S Identification Mark on Do. N° 47 JES. Material of Thrust shaft S Identification Mark on Do. N° 47 JES. Material of Tunnel shafts S Identification Marks on Do. -- Material of Screw shafts S Identification Marks on Do. -- Material of Steam Pipes Steel Test pressure 600 lbs.

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? YES If so, state name of vessel "Cleveland," "Toulouse" "Portiers."

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been built under Special Survey and in accordance with the Rules. The workmanship and materials are sound and good. The Engines will be eligible, in my opinion, to receive the notation *LMC Port Arthur, Ontario 28/9/17 Robert Lewis

It is submitted that this vessel is eligible for THE RECORD. + LMC. 9.17.

The amount of Entry Fee £ 15.00 : When applied for, 1/3 to Special £170.00 : 15.19.17 Donkey Boiler Fee £257.00 : When received, Travelling Expenses (if any) £ : 15.19.17 J. Seller. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York OCT 9 1917 Assigned + LMC 9.17 Elec. Light