

REPORT ON MACHINERY.

REC'D NEW YORK AUG 6 1927 No. 4252

Date of writing Report Aug 4 1927 When handed in at Local Office Aug 4 1927 Port of Newport News Va Received at London Office 23 AUG 1927

No. in Survey held at 10220 on the Machinery of the Steel Steam "CHAMBLEE" Date, First Survey Jul 16 1927 Last Survey Aug 2 1927

Master Duluth Minn. Built at Duluth Minn. By whom built McDonnell Duluth Co. Tons { Gross 2323 Net 1394 When built 1919

Engines made at Duluth Minn. By whom made McDonnell Duluth Company when made 1919

Boilers made at Duluth Minn. By whom made McDonnell Duluth Company when made 1919

Registered Horse Power 262 Owners Hammond Lumber Company Port belonging to New York

Nom. Horse Power as per Section 28 262 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 20"-33"-54" Length of Stroke 40 Revs. per minute 85 Dia. of Screw shaft 11 1/2" Material of Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight Yes

Is the propeller boss Yes If the liner is in more than one length are the joints burned No 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 Yes

Is the shaft lapped or protected between the liners Yes Length of stern bush 4'-0 3/4"

Dia. of Tunnel shaft 10 1/2" Dia. of Crank shaft journals 11 1/2" Dia. of Crank pin 11 1/2" Size of Crank webs 21 x 7 1/2" Dia. of thrust shaft under 11"

Dia. of screw 14'-0" Pitch of Screw 12'-5" No. of Blades 4 State whether moveable No Total surface 64 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 20" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 1 1/2" Stroke 20" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 10 x 6 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps Forward Hold 2-3"

In Engine Room 4-3" One Tunnel Well 3" In Holds, &c. Forward Hold 2-3"

No. of Bilge Injections 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 Yes

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Are 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 Yes

Are 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 Yes

That pipes are carried through the bunkers None How are they protected Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform in E. Room

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Illinois Steel Co. Chicago, Ill.

Total Heating Surface of Boilers 3828 Is Forced Draft fitted Yes No. and Description of Boilers 2 Triple Piped 2 SB

Working Pressure 190 lbs Tested by hydraulic pressure to 285 lbs Date of test July 22 1927 No. of Certificate ✓

Can each boiler be worked separately Yes Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to ✓

Each boiler Two Spring loaded Area of each valve 7.07 sq ft Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 10" Mean dia. of boilers 13'-0" Length 11'-0" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 60000 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.A.P.

g. seams T.R.A.B.S. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/4" Width of butt straps 18 1/4"

Percentages of strength of longitudinal joint 84.6 Working pressure of shell by rules 205 lbs Size of manhole in shell 16" x 12"

Use of compensating ring 34 x 31 x 1 1/4" No. and Description of Furnaces in each boiler 2 Morrison Material Steel Outside diameter 52 1/4"

Length of plain part top 3'-5 1/2" Thickness of plates bottom 3'-5 1/2" Description of longitudinal joint Welded No. of strengthening rings Corrupted

Working pressure of furnace by the rules 193 lbs Combustion chamber plates: Material Steel Thickness: Sides 5 1/2" Back 5 1/2" Top 5 1/2" Bottom 1 3/4"

Pitch of stays to ditto: Sides 6 x 7 1/2" Back 6 1/4 x 6 1/2" Top 6 x 7 1/2" If stays are fitted with nuts or riveted heads R. Heads Working pressure by rules 212 lbs

Material of stays Steel Area at smallest part 1.27 sq ft Area supported by each stay 4.707 sq ft Working pressure by rules 222 lbs End plates in steam space: ✓

Material Steel Thickness 1 1/16" Pitch of stays 14 x 15" How are stays secured D. Nuts Working pressure by rules 239 lbs Material of stays Steel

Area at smallest part 5.93 sq ft Area supported by each stay 210 sq ft Working pressure by rules 262 Material of Front plates at bottom Steel

Thickness 3 1/4" Material of Lower back plate Steel Thickness 5 1/2" Greatest pitch of stays 3 1/2 x 6 1/2" Working pressure of plate by rules 324 lbs

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4 x 3 3/8" Material of tube plates Steel Thickness: Front 3 1/4" Back 1 1/16" Mean pitch of stays 10 1/2 x 7 1/2"

Pitch across wide water spaces 13 1/2" Working pressures by rules 29 1/2 lbs Girders to Chamber tops: Material Steel Depth and ✓

Thickness of girder at centre 8 5/8 x 1 1/4" Length as per rule 26 3/32 Distance apart 7 5/8" Number and pitch of stays in each 3-6"

Working pressure by rules 229 Steam dome: description of joint to shell Not fitted % 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 Not fitted Tested by Hydraulic Pressure to ✓

Use of Test ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓

Material of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

One propeller: one set of top & bottom end-brasses: two top end bolts & nuts: two bottom end bolts & nuts: two main bearing bolts & nuts: piston rings for H.P. M.P. & L.P. pistons: one set of sea & hold pump valves for attached pumps: one set of air pump valves: valves & seats for independent auxiliary sea pumps & hold pumps: bolts & nuts of various sizes: iron bars & flats of various sizes.

The foregoing is a correct description,

Manufacturer.

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

July 16. 18. 20. 22. 27. 29. 30. Aug. 1. 2. 1927
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Is the approved plan of main boiler forwarded herewith *Yes.*

Dates of Examination of principal parts—Cylinders *20/7/27* Slides *20/7/27* Covers *20/7/27* Pistons *20/7/27* Rods *20/7/27*
Connecting rods *20/7/27* Crank shaft *20/7/27* Thrust shaft *20/7/27* Tunnel shafts *20/7/27* Screw shaft *18/7/27* Propeller *18/7/27*
Stern tube *18/7/27* Steam pipes tested *22/7/27* Engine and boiler seatings *20/7/27* Engines holding down bolts *20/7/27*
Completion of pumping arrangements *27/7/27* Boilers fixed *27/7/27* Engines tried under steam *18/8/27*
Completion of fitting sea connections *27/7/27* Stern tube *27/7/27* Screw shaft and propeller *27/7/27*
Main boiler safety valves adjusted *18/8/27* Thickness of adjusting washers *Lock & up after*
Material of Crank shaft *Steel* Identification Mark on Do. *Steel* Material of Thrust shaft *Steel* Identification Mark on Do. *Steel*
Material of Tunnel shafts *Steel* Identification Marks on Do. *Steel* Material of Screw shafts *Steel* Identification Marks on Do. *Steel*
Material of Steam Pipes *Morse Iron or Steel Tubing* Test pressure *150 lbs*
Is an installation fitted for burning oil fuel *No.* 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

St. Francis Xavier & St. Chappell
4029 N.N.S.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines & Boilers of this vessel were built under the supervision of the American Bureau of Shipping and the materials tested in accordance with their Rules. They are of good design and the workmanship is good & efficient. The Boilers have been examined externally and found in good condition: they were subjected to a hydraulic test of 25 lbs. per sq. inch and found tight & sound. Boiler mounting, examined & found in good order. The mounting of the Boilers compared with the photographs supplied and found to agree. The Safety Valves adjusted to blow at 170 lbs. per sq. inch. Main Engines and auxiliary machinery, Steam Clutch for Engine & Windlass Engine tested & found to be in good working order. Main Engine & Boiler fittings examined & found efficient.

The case is respectfully submitted to the notation of L.M.C. 8-27-Propeller No. 8-27 in the Register Book. The propeller shall be drawn at intervals of two years in examination of Liver Joints.

The amount of Entry Fee ... £ :
Special ... *\$321.50*
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) *\$10.00*

When applied for, *Aug 5 1927*
When received, *10/9/27*

[NEW YORK AUG 10 1927]

Committee's Minute

Assigned *See form Rpt. 9*

C. H. Hudson
Engineer Surveyor to Lloyd's Register of Shipping

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