

Rpt. 4.

## REPORT ON MACHINERY.

No. 264.

Received at London Office

MON. NOV. 15 1920

Date of writing Report 15<sup>th</sup> SEP 1920 When handed in at Local Office 23<sup>rd</sup> OCT 1920 Port of DETROIT MICH. U.S.A.No. in Survey held at DETROIT, MICH.  
Reg. Book.Date, First Survey 14<sup>th</sup> Nov. 1919 Last Survey 7<sup>th</sup> AUGUST, 1920(Number of Visits 72.)on the STEEL SINGLE SCREW STEAMER "CHIPPEWA."Gross 2309  
Net 1440  
When built 1920Master Built at WYANDOTTE MICH. By whom built DETROIT SHIPBUILDING CO.,Engines made at DETROIT By whom made DETROIT SHIPBUILDING CO., when made 1920Boilers made at " By whom made " when made 1920Registered Horse Power Owners INDEPENDENT STEAMSHIP CO. Port belonging to WYANDOTTE.Nom. Hors. Power as per Section 28 265 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

ENGINES, &c.—Description of Engines TRIPLE EXPANSION No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 20" x 33" x 54" Length of Stroke 40" Revs. per minute 87.5 Dia. of Screw shaft as per rule 11 9/16" Material of S  
 as fitted 11 9/16" screw shaft  
 Is 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 tight  
 in the propeller boss YES 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 50 1/2"  
 Dia. of Tunnel shaft as per rule 10 3/8" Dia. of Crank shaft journals as per rule 10 9/16" Dia. of Crank pin 11" Size of Crank webs 162 x 7" Dia. of thrust shaft under  
 as fitted 10 1/2" collars 11" Dia. of screw 14'-0" Pitch of Screw 12'-5" No. of Blades 4 State whether moveable YES Total surface 54 7/5  
INDEPENDENT  
 No. of Feed pumps 2 Diameter of ditto 10 1/2" x 12" Stroke Can one be overhauled while the other is at work YES  
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work YES  
 No. of Donkey Engines 2 Sizes of Pumps 1 1/2" x 6" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room: 3-3" DIA. STROKEHOLD: 2-3" DIA. In Holds, &c. FOREHOLD: 2-3" DIA. AFTERHOLD: 3-3" DIA.  
TUNNEL: 1-3" DIA. 2 COFFERDAMS: EACH 1-3" DIA.  
 No. of Bilge Injections 1 size 1/2" DIA. Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size YES 3" DIA.  
 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 ✓  
 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 ABOVE  
 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  
 What pipes are carried through the bunkers NONE How are they protected ✓  
 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 UPPER DECK

BOILERS, &c.—(Letter for record R.) Manufacturers of Steel CARNEGIE STEEL CO. & LUKENS STEEL CO.,

Total Heating Surface of Boilers 3940 Is Forced Draft fitted YES No. and Description of Boilers 2 MULTITUBULAR, SINGLE END  
 Working Pressure 185 Tested by hydraulic pressure to 278 Dates of tests 27<sup>th</sup> & 31<sup>st</sup> MAR 1920 No. of Certificate 338 & 339  
 Can each boiler be worked separately YES Area of fire grate in each boiler 44 No. and Description of Safety Valves to  
 each boiler 2 SPRING LOADED Area of each valve 7 1/4" Pressure to which they are adjusted 188 LBS Are they fitted with easing gear YES  
 Smallest distance between boilers on uptakes and bunkers on woodwork 1 1/2" Mean dia. of boilers 13'-2" Length 10'-10 1/2" Material of shell plates S  
 Thickness 1 3/32" Range of tensile strength 60,000-71,680 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.R.  
 long. seams D.B.S. T.R. Diameter of rivet holes in long. seams 1 1/16" & 1 3/8" Pitch of rivets 9" Lap of plates or width of butt straps 12 1/2" & 20 1/2"  
 Per centages of strength of longitudinal joint rivets 84.9 Working pressure of shell by rules 190.7 Size of manhole in shell 15" x 11"  
 "plate 84.72 Size of compensating ring 33" x 33" x 1 1/2" No. and Description of Furnaces in each boiler 2 CORR. Material S Outside diameter 52 1/4"  
 Length of plain part top ✓ Thickness of plates crown 3/32" Description of longitudinal joint WELD No. of strengthening rings NONE  
 bottom ✓ Working pressure of furnace by the rules 228.9 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 9/16" Bottom 5/8"  
 Pitch of stays to ditto: Sides 1/4" x 1/4" Back 1/4" x 1/4" Top 1/4" x 1/4" If stays are fitted with nuts or riveted heads R.H. Working pressure by rules 190.2  
 Material of stays IRON Area at smallest part 1.72 Area supported by each stay 52.56 Working pressure by rules 203.6 End plates in steam space:  
 Material S Thickness 1" Pitch of stays 16 3/8" x 14" How are stays secured D. NUTS Working pressure by rules 186.4 Material of stays S  
 Area at smallest part 4.9 Area supported by each stay 236.18 Working pressure by rules 215.9 Material of Front plates at bottom S  
 Thickness 1" Material of Lower back plate S Thickness 1" Greatest pitch of stays 13 3/4" x 7 1/4" Working pressure of plate by rules 211.9  
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 1/2" Material of tube plates S Thickness: Front 1" Back 1 1/16" Mean pitch of stays 9 1/8"  
 Pitch across wide water spaces 13 1/2" Working pressures by rules 196.6 Girders to Chamber tops: Material S Depth and  
 thickness of girder at centre 9 1/4" x 1 1/2" Length as per rule 32 5/8" Distance apart 7" Number and pitch of stays in each 3-7 3/4"  
 Working pressure by rules 224.7 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 FOSTER Date of Approval of Plan 21<sup>st</sup> FEB. 1920Tested by Hydraulic Pressure to 630Date of Test 7<sup>th</sup> FEB. 1920Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler YESDiameter of Safety Valve 1 1/2"Pressure to which each is adjusted 191Is Easing Gear fitted YES

If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship?

009243-009255-0080



IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 1 Set each of Top & Bott. end, main bearing & coupling bolts. 1 Set each of Feed, Air & Bilge pump valves. 1 Ecc. strap. 1 Set of piston ring springs. 12 Boiler tubes. 1 Set of safety valve springs. 36 Condenser tubes & ferrules. 2 Bronze propeller blades & studs. Assorted Iron, Bolts & Nuts.

The foregoing is a correct description,

DETROIT SHIPBUILDING CO.  
*John Lueders*  
Assistant General Superintendent

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 May 14 20 26 DEC. 11/16/30 JAN. 7 9 12 14 16 19 23 FEB. 4 6 9 10 12 16 19 24 25 28 MAR. 1 3 8 9 11 12 15 16 17 20 22 24 26 27 29 31 APR. 1 3 6 7 9 10 14 19 20 22 23  
During erection on board vessel - - - 1920 APR. 26 28 MAY 3 5 6 10 12 14 19 21 26 27 JUNE 2 3 4 JULY 1 19 22 29 AUG. 3 7  
Total No. of visits 72

Is the approved plan of main boiler forwarded herewith No

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 29-3-20 Slides 1-4-20 Covers 20-4-20 Pistons 20-4-20 Rods 20-4-20  
Connecting rods 2-1-20 Crank shaft 1-4-20 Thrust shaft 6-4-20 Tunnel shafts 14-1-20 Screw shaft 24-2-20 Propeller 29-4-20  
Stern tube 11-3-20 Steam pipes tested 21-5-20 Engine and boiler seatings 1-4-20 Engines holding down bolts 12-5-20  
Completion of pumping arrangements 2-6-20 Boilers fixed 12-5-20 Engines tried under steam 3-6-20  
Completion of fitting sea connections 26-3-20 Stern tube 26-3-20 Screw shaft and propeller 26-3-20 3-8-20  
Main boiler safety valves adjusted 2-6-20 Thickness of adjusting washers Port F 1" Fl. 1 1/2" Starb. F 1 1/2" A. 1 1/2"  
Material of Crank shaft S Identification Mark on Do. 4-20 WRM LLOYD'S No 201  
Material of Thrust shaft S Identification Mark on Do. 4-20 WRM LLOYD'S No 201  
Material of Tunnel shafts S Identification Marks on Do. 1-20 WRM LLOYD'S No 201  
Material of Screw shaft S Identification Marks on Do. 2-20 WRM LLOYD'S No 201  
Material of Steam Pipes LAPWELDED STEEL Test pressure 555 LBS. THICKNESS 3/8"  
Is an installation fitted for burning oil fuel YES Is the flash point of the oil to be used over 150°F. YES  
Have the requirements of Section 49 of the Rules been complied with YES  
Is this machinery duplicate of a previous case YES If so, state name of vessel "MONTFAUCON" REPORT No 257

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

These Engines & Boilers have been built under special survey & in accordance with the Rules. The materials & workmanship are of good quality. They have been fitted on board in an efficient manner, tried under steam & found satisfactory. They are eligible, in my opinion to be classed in the Register Book with the record of LMC 8.20.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC. 8.20. FD.

Fitted for Oil Fuel 8.20 F.P. above 150°F

Reel  
24/4/20

APR 24

The amount of Entry Fee ... \$ 10 : 00 :  
Special ... \$ 166 : 25 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) \$ 5 : 60 :  
When applied for, 21 Oct 1920  
When received, 29 Oct 1920

W. R. Mitchell  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York NOV - 3 1920

Assigned + LMC. 8.20

CERTIFICATE WRITTEN 15/11/20



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Foundation