

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.** Date, First Survey **14<sup>th</sup> Nov. 1919** Last Survey **7<sup>th</sup> AUGUST, 1920.**  
Reg. Book. (Number of Visits **72.**)

Master Built at **WYANDOTTE MICH.** By whom built **DETROIT SHIPBUILDING CO.,** Tons } Gross 2309  
Net 1440  
When built 1920

Engines made at **DETROIT** By whom made **DETROIT SHIPBUILDING CO.,** when made 1920

Boilers made at " By whom made " " " when made 1920

Registered 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 **11.75"** Material of screw shaft **S**  
as fitted **11.75"**

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 **10.39"** Dia. of Crank shaft journals as per rule **10.91"** Dia. of Crank pin **11"** Size of Crank webs **162 x 7"** Dia. of thrust shaft under collars **11"** Dia. of screw **14'-0"** Pitch of Screw **12'-5"** No. of Blades **4** State whether moveable **YES** Total surface **54.75**

No. of Feed pumps **2** Diameter of ditto **10 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 **1/2 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: 3-3" 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** Pressure to which they are adjusted **188 LBS** Are they fitted with easing gear **YES**

Smallest distance between boilers on upper 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"** Top 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"**

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 **1 1/32"** Description of longitudinal joint **WELD** No. of strengthening rings **NONE** bottom **1 1/32"**

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 **1.42** 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 1/8" 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 1 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 **3-1 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 **✓**

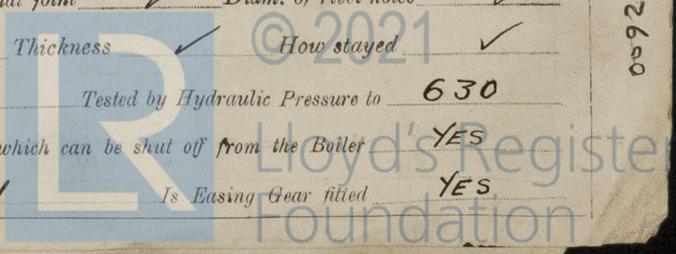
SUPERHEATER. Type **FOSTER** Date of Approval of Plan **21<sup>st</sup> FEB. 1920** Tested by Hydraulic Pressure to **630**

Date of Test **7<sup>th</sup> FEB 1920** Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler **YES**  
Diameter of Safety Valve **1 1/2"** Pressure to which each is adjusted **191** Is 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

002643-009255-0080



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 & fertules. 2 Bronze propeller blades & studs. Assorted Iron, Bolts & Nuts.

The foregoing is a correct description,

DETROIT SHIPBUILDING CO.  
*John Sweeney*  
Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1919 May 14, 20, 26, 28, 30, 31, 1920 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, 25, 28, 29, 30, 31, May 3, 5, 6, 10, 12, 14, 19, 21, 26, 27, June 2, 3, 7, July 1, 19, 22, 29, Aug. 3, 7. Total No. of visits **72**. Is the approved plan of main boiler forwarded herewith **No**

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" F. 1 1/2" STAB. F. 1 3/4" A. 1 5/16"** Material of Crank shaft **S** Identification Mark on Do. **LLOYD'S No 201** Material of Thrust shaft **S** Identification Mark on Do. **LLOYD'S No 201** Material of Tunnel shafts **S** Identification Marks on Do. **LLOYD'S No 201** Material of Screw shaft **S** Identification Marks on Do. **LLOYD'S No 201** Material of Steam Pipes **LAPWELDED STEEL** Test pressure **535 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 **L.M.C. 8.20**

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8.20. F.D. Fitted for Oil Fuel 8.20 F.P. above 150°F

*Reh*  
24/11/20  
*APR*

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

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

Committee's Minute New York NOV - 3 1920 + L.M.C. 8.20

Assigned

CERTIFICATE WRITTEN 15/11/20



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DETROIT MICH. Certificate (if required) to be sent to the space for Committee's Minute.