

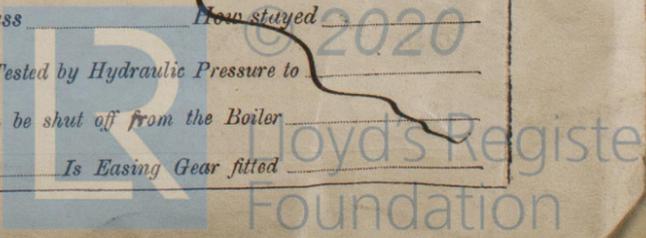
# REPORT ON MACHINERY.

Received at London Office  
 Date of writing Report DEC 6<sup>th</sup> 1916 When handed in at Local Office Dec 16<sup>th</sup> 1916 Port of DETROIT, MICH.  
 No. in Survey held at DETROIT, MICH. Date, First Survey SEPT 20<sup>th</sup> Last Survey March 29 1917  
 Reg. Book. 93 on the 1235<sup>th</sup> St. Cleveland 1235 (Number of Visits)  
 Master Karl M. Thuestad Built at Detroit By whom built Superior S.S.B.Co. Tons {Gross 2045  
 Net 1258  
 When built 1916  
 Engines made at DETROIT, MICH. By whom made DETROIT SHIPBUILDING COMPANY when made 1916  
 Boilers made at Lorain, Ohio By whom made American Shipbuilding Co. when made 1916  
 Registered Horse Power 244 Owners James E. Davidson Port belonging to Hangesand  
 Nom. Horse Power as per Section 28 244 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" - 33" - 54" Length of Stroke 40" Revs. per minute \_\_\_\_\_ Dia. of Screw shaft as per rule 11.221 Material of screw shaft 5  
 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 SOLDERED 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 If two liners are fitted, is the shaft lapped or protected between the liners protected with brass sleeve Length of stern bush 51"  
 Dia. of Tunnel shaft as per rule 10.3 Dia. of Crank shaft journals as per rule 10.815 Dia. of Crank pin 11" Size of Crank webs 7x21 Dia. of thrust shaft under collars 11" Dia. of screw 2-6" Pitch of Screw 13-3" No. of Blades 4 State whether Solid Total surface 60 sq ft  
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 20" 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 \_\_\_\_\_ Sizes of Pumps \_\_\_\_\_ 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, or 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 COCKS  
 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 Soil, Air and Electric How are they protected Steel plate  
 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 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 \_\_\_\_\_ 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 \_\_\_\_\_  
 Percentages of strength of longitudinal joint \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell \_\_\_\_\_  
 Size of compensating \_\_\_\_\_ 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: \_\_\_\_\_ 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 \_\_\_\_\_



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

*Spare gear as required.  
see Superior Wis. cable 28/4/17.*

The foregoing is a correct description,

DETROIT SHIPBUILDING CO.

*Frank Jeffrey* Manufacturer.

Dates of Survey while building: During progress of work in shops -- SEPT. 20-28. OCT. 17-19-30. NOV. 1-14  
During erection on board vessel --- Jan 5 to 13, 25 to 31. Feb 1 to 17, 27 to 28. March 1 to 30  
Total No. of visits 7 + 60

Is the approved plan of main boiler forwarded herewith   
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 20.9.16 Slides 19.10.16 Covers 20.9.16 Pistons 19.10.16 Rods 19.10.16

Connecting rods 17.10.16 Crank shaft 30.10.16 Thrust shaft 20.10.16 Tunnel shafts 28.9.16 Screw shaft 17.10.16 Propeller 17.10.16

Stern tube 17.10.16 Steam pipes tested 17/2/17 Engine and boiler seatings 29/8/16 Engines holding down bolts 27/1/17

Completion of pumping arrangements 17/2/17 Boilers fixed 11/16 Engines tried under steam 18/3/17

Completion of fitting sea connections 21/10/16 Stern tube 21/10/16 Screw shaft and propeller 21/10/16

Main boiler safety valves adjusted 8/3/17 Thickness of adjusting washers 5/8"

Material of Crank shaft S. Identification Mark on Do. No. 15767 Material of Thrust shaft S. Identification Mark on Do. No. 15767

Material of Tunnel shafts S. Identification Marks on Do. No. 15767 Material of Screw shafts S. Identification Marks on Do. No. 15767

Material of Steam Pipes Steel  Test pressure 750#

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 "Nord", "Vestland" &c.

General Remarks (State quality of workmanship, opinions as to class, &c. *These engines have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound and good.*

*In my opinion the engines will be eligible to receive the notation LMC Superior, Wis. 12/16.*

*Robert*

The amount of Entry Fee ... £ :1500: When applied for,  
1/2 Special DETROIT ... £ \$ 57.00 : Dec. 1916 1916.  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : : March 1917

*A. G. Wood*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned  
FRI. 4 MAY 1917  
*+ LMC 3.17 Subject*



Certificate (if required) to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.