

REPORT ON MACHINERY.

No. 89

REC'D NEW YORK July 11 1917

Received at London Office THU. 9 AUG. 1917
CLEVELAND, OHIO. & Chicago, Ill.

Date of writing Report 25. Apr 1917 When handed in at Local Office 1917 Port of CLEVELAND, OHIO. & Chicago, Ill.

No. in Survey held at Louis, Ohio. Date, First Survey 24. 1916 Last Survey 21. Apr 1917
 Reg. Book. S.S. "DANE BROG" (Number of Visits 44 30th April 1917. Gross 2088 Net 1275)

Master W. Nielsen Built at Chicago, Ill. By whom built Chicago Shipbuilding Co. When built 1917

Engines made at Louis, Ohio. By whom made The American Ship Co. (No 1238) when made 1917. 4

Boilers made at do By whom made do (No 1175) when made 1917. 2

Registered Horse Power 374 Owners Svenson & Jespersen Port belonging to Copenhagen.

Nom. Horse Power as per Section 28 372 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 85 Dia. of Screw shaft 11.03 Material of screw shaft S.

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 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 If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 51

Dia. of Tunnel shaft 10.31 as per rule 10.03 Dia. of Crank shaft journals 10.82 as per rule 10.82 Dia. of Crank pin 11 Size of Crank webs 21 x 7 Dia. of thrust shaft under collars 11 1/2 Dia. of screw 12.6 Pitch of Screw 13-3 No. of Blades 4 State whether moceable No. 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 3 Sizes of Pumps 10x12x12, 12x8 1/2x12, 10x6x10 No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room & Bl. Room. 4-3" and 1 Special 3" In Holds, &c. No. 1 & 2 - 3" No. 3 & 4 - 3"

No. of Bilge Injections 1 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 Inlet Valves, Blow-off 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 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

Dates of examination of completion of fitting of Sea Connections 26.4.17 of Stern Tube 26.4.17 Screw shaft and Propeller 26.4.17

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

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

Total Heating Surface of Boilers 5246 Is Forced Draft fitted No. No. and Description of Boilers Two, Cyl. Int. S.E.

Working Pressure 180 lb Tested by hydraulic pressure to 270 lb Date of test 14.2.17 No. of Certificate 75

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 sq ft No. and Description of Safety Valves to each boiler Two Spring Area of each valve 7.07 sq in Pressure to which they are adjusted 183 lb sq in Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 14-6 Length 11.23 Material of shell plates S.

Thickness 1/4 Range of tensile strength 28/32 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams L.S.R. long. seams D.B.S./T.R. Diameter of rivet holes in long. seams 15/16 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 19 3/4

Per centages of strength of longitudinal joint rivets 94.7 Working pressure of shell by rules 192 lb Size of manhole in shell 15" x 11" plate 84.6

Size of compensating ring 33 x 33 No. and Description of Furnaces in each boiler 3, MORISON Material S. Outside diameter 46

Length of plain part top Thickness of plates bottom 5/8 Description of longitudinal joint Weld. No. of strengthening rings 5/8 5/8 5/8 5/8

Working pressure of furnace by the rules 219 lb Combustion chamber plates: Material S. Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 5/8

Pitch of stays to ditto: Sides 7 7/16 Back 7 7/16 Top 8 7/16 If stays are fitted with nuts or riveted heads Best Riv. TD. Working pressure by rules 180 lb

Material of stays S. Diameter at smallest part 1.26 Area supported by each stay 55.3 Working pressure by rules 182 lb End plates in steam space: Material S. Thickness 3/32 Pitch of stays 7.15 3/4 How are stays secured D.N. Working pressure by rules 199 lb Material of stays S.

Area at smallest part 5.4 Area supported by each stay 268 lb Working pressure by rules 210 lb Material of Front plates at bottom S.

Thickness 13/16 Material of Lower back plate S. Thickness 5 1/8 + 1/2 D.B.S. Greatest pitch of stays 12 1/2. 6 1/2 Working pressure of plate by rules 266 lb

Diameter of tubes 3 1/4 Pitch of tubes 4 1/4. 4 1/8 Material of tube plates S. Thickness: Front 3/4 Back 3/4 Mean pitch of stays 2 3/8. 8 1/2

Pitch across wide water spaces 13 3/4 Working pressures by rules 183 lb Girders to Chamber tops: Material S. Depth and thickness of girder at centre 8 5/8. 1 1/2 Length as per rule 30 Distance apart 8 Number and pitch of stays in each 3 @ 7 1/2

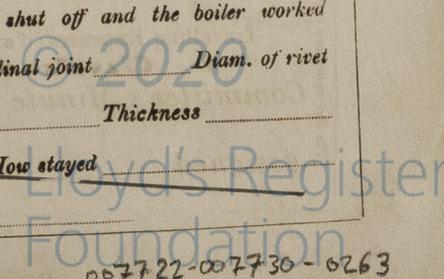
Working pressure by rules 220 lb Superheater or Steam chest; how connected to boiler NONE Can the superheater be shut off and the boiler worked separately Yes

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IF THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN. If not, state chaffer, and when, also will be sent. If a Report also sent on the Hull of the Ship



067722-007730-0263

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 Connecting Rods and Bolts & nuts — 2 Bottom end ditto — 2 Main Bearing Bolts — 1 set Coupling Bolts — 1 set Feed & Bilge Pump Valves — Assorted Bolts & nuts — Assorted Iron

The American Ship Builder
The foregoing is a correct description,
J. C. Jew

Manufacturer.

Dates of Survey while building	During progress of work in shops --	ENG. 1916. Dec 2, 7, 21. 1917 Jan. 4, 12, 31. Feb. 7, 14, 17, 22. Mar. 2, 7, 19, 22, 23, 30. Apr. 4, 9, 11, 12, 19, 21.
	During erection on board vessel --	BLRS. " Nov 24, Dec 2, 7, 19, 21. 1917. Jan. 4, 9, 12, 16, 22, 31. Feb. 3, 7, 14.
	Total No. of visits	44

Is the approved plan of main boiler forwarded herewith No Yes
 " " " donkey " " " EXCEPT. C.C. NOTS.

Dates of Examination of principal parts—Cylinders 9. 4. 17 Slides 22. 2. 17 Covers 22. 2. 17 Pistons 21. 4. 17 Rods 21. 4. 17

Connecting rods 4. 1. 17 Crank shaft 19. 4. 17 Thrust shaft 19. 4. 17 Tunnel shafts 11. 5. 17 Screw shaft 22. 3. 17 Propeller 30. 3. 17

Stern tube 30. 3. 17 Steam pipes tested 2. 6. 17 & 14. 6. 17 Engine and boiler seatings 4. 5. 17 Engines holding down bolts 8. 6. 17.

Completion of pumping arrangements 26. 6. 17 Boilers fixed 25. 5. 17. Engines tried under steam 26. 6. 17

Main boiler safety valves adjusted 26. 6. 17 Thickness of adjusting washers Port F. 3 1/32" A. 1 9/64" Stand. F. 55/64" A. 63/64"

Material of Crank shaft O.H.S. Identification Mark on Do. 1238 W.L. Material of Thrust shaft O.H.S. Identification Mark on Do. 1238 W.L.

Material of Tunnel shafts O.H.S. Identification Marks on Do. Nos. 283-4-5-6-7 Material of Screw shafts O.H.S. Identification Marks on Do. 1238 W.L.

Material of Steam Pipes S. ✓ Test pressure 540 lbs. ✓

General Remarks (State quality of workmanship, opinions as to class, &c. *The above Engines and Boilers have been constructed under Special Survey. The materials and workmanship employed in their construction are sound and good.*)

They have been forwarded to Chicago (Ill.) to be fitted on board the ship No 82 being constructed by the Chicago Shipbuilding Co.

The Machinery & Boilers for this Vessel have been fitted on board in a satisfactory manner. In the opinion of the Undersigned this Vessel is entitled to the notation of +L.M.C., in the Register Book, with date of entry 6, 17.

It is submitted that this vessel is eligible to THE RECORD. + L.M.C. 6.17

J.M. Jew
13/8/17
W. Lane *H. Rhobelland*
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £	\$10.00	When applied for.	7th July 1917
2/3rd. Cleveland .. £	112.00	When received.	27/9/17
Special Chicago .. £	56.50		
1/3rd. Chicago .. £			
Donkey Boiler Fee .. £			
Travelling Expenses (if any) £	22.00		
" Cleveland. \$	13.50		

Committee's Minute New York JUL 24 1917

Assigned + L.M.C. 6.17 Elec. Light



ms owners

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