

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

Port of

No. in Survey held at Lamin, Ohio.
Reg. Book.
on the S.S. "DANE BROG"

Date, First Survey 24. 1916 Last Survey 21. Apr 1917
(Number of Vessels 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 Lamin, Ohio. By whom made The American Shipbuilding Co. (No 1238) when made 1917. 4
Boilers made at Lamin, Ohio. By whom made The American Shipbuilding Co. (No 1175) when made 1917. 2
Registered Horse Power 274 Owners Svenson & Jespersen Port belonging to Copenhagen.
Nom. Horse Power as per Section 28 272 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 as per rule 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 as per rule 10.31 Dia. of Crank shaft journals 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 moveable No Total surface 605
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 10 x 12 1/2, 12 x 8 1/2, 10 x 6 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room & Bh. Room. 4-3 and 1 Special 3 In Holds, &c. Nos. 1 & 2 - 3 Nos. 3 & 4 - 3

No. of Bilge Injections 1 sizes 6 Connected to condenser, or to circulating pump pump 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. L.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 No. and Description of Safety Valves to
each boiler Two Spring Area of each valve 7.07 1/2 Pressure to which they are adjusted 183 lb 1/2 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 1-23 1/2 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 285/78 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 No. and Description of Furnaces in each boiler 3. Morrison Material S. Outside diameter 46.
Size of compensating ring 33 x 33 Length of plain part top 5 Thickness of plates crown 5/8 Description of longitudinal joint Weld. No. of strengthening rings
bottom 5/8 Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 5/8
Working pressure of furnace by the rules 219 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 1/2 If stays are fitted with nuts or riveted heads Best Riv. Working pressure by rules 180 lb
Material of stays S. Diameter at smallest part 2.6 Area supported by each stay 55.3 Working pressure by rules 182 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 Material of stays S.
Diameter at smallest part 5.4 Area supported by each stay 268 Working pressure by rules 210 Material of Front plates at bottom S.
Thickness 1/6 Material of Lower back plate S. Thickness 5/8 Greatest pitch of stays 12 1/2 6 1/2 Working pressure of plate by rules 266
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 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked
separately 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

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

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 Rod Iron 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 Bldg Co.
The foregoing is a correct description,
J. C.

Manufacturer.	
Dates of Survey while building	During progress of work in shops — — — During erection on board vessel — — — Total No. of visits
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. BLRS. " Nov 24. Dec 2. 7. 19. 21. 1917. Jan. 4. 9. 12. 16. 22. 31. Feb. 3. 7. 14.	1917 Mar. 13, Apr. 14, 18, 26 May 4, 7, 10, 11, 25 June 5, 8, 15, 17, 26, 27, 29, 30.
Is the approved plan of main boiler forwarded herewith <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
" " " donkey " " <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	

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
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.	1258 W.L.	Material of Thrust shaft	O. H. S.	Identification Mark on Do.	1258 W.L.		
Material of Tunnel shafts	O. H. S.	Identification Marks on Do.	11-5-17 H.R.M.	Material of Screw shafts	O. H. S.	Identification Marks on Do.	1138 W.L.		
Material of Steam Pipes	S. V	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 for THE RECORD. +L.M.C. 6.17.

J. M. J. W. D. 13/8/17

W. Lane H. Rhoads
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		
Special Chicago.	£ 56.50	When received,	27/9/17
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

