

Attached to Baltimore Report No 2221

REPORT ON MACHINERY

N.Y. No. 14353

Originating Report *Oct 17* When handed in at Local Office *10* Port of *New York*
Survey held at *Hoboken N.J.* Date, First Survey *July 7 - 1916* Last Survey *19*
on the *Turbine Machinery for U.S. - Baltimore P.B. & D.D.C. - 1/2* "Williamson" (Number of Visits "1")
Gross *3321*
Net *2032* Tons
Built at *Baltimore Md.* By whom built *Baltimore D.D. & S.B. Co.* When built *1917*
By whom made *W. & A. Fletcher Co.* when made *1917*
By whom made *W. & A. Fletcher Co.* when made *1917*
Horse Power *1300* Owners *United States Shipping Board*
Emergency Fleet Corporation. Port belonging to *New York*
Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

NE ENGINES, &c. — Description of Engines *Geared Turbines* No. of Turbines *2*
of Rotor Shaft Journals, H.P. *5 1/2* L.P. *6* Diameter of Pinion Shaft *4 5/8*
of Journals *2 3/8* Distance between Centres of Bearings *22 5/16* Diameter of Pitch Circle *15 1/4*
of Wheel Shaft *1 1/2* Distance between Centres of Bearings *52 3/4* Diameter of Pitch Circle of Wheel *11 7/16*
Face *25* Diameter of Thrust Shaft under Collars *7 3/8* (Rigidity thrust bearing) Diameter of Tunnel Shaft as per rule *1 1/2*
as fitted *1 1/2* Diameter of Propeller *14 - 2* Pitch of Propeller *13 - 6*
as fitted *1 1/2* Diameter of same as per rule *11.35* as fitted *1 1/2* Diameter of Propeller *14 - 2* Pitch of Propeller *13 - 6*
as fitted *1 1/2* State whether Movable *No* Total Surface *66.2* Diameter of Rotor Drum, H.P. *59 1/2* L.P. *2 - 9* Astern *21*
at Bottom of Groove, H.P. *2 1/4* L.P. *2 1/4* Astern *Solid* Revs. per Minute at Full Power, Turbine *2000* Propeller *92*

CULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
ANSION	<i>1/2</i>	<i>16 5/16</i>	<i>16</i>	<i>1/2</i>	<i>35 1/2</i>	<i>3</i>	<i>3/8</i>	<i>21 3/4</i>	<i>6</i>
"	<i>1 1/16</i>	<i>16 3/8</i>	<i>16</i>	<i>1 1/8</i>	<i>36 1/4</i>	<i>3</i>	<i>3/4</i>	<i>22 1/2</i>	<i>6</i>
"	<i>1 1/4</i>	<i>17</i>	<i>16</i>	<i>2 1/4</i>	<i>37 1/2</i>	<i>3</i>	<i>1 1/2</i>	<i>24</i>	<i>6</i>
"	<i>3/4</i>	<i>24 1/2</i>	<i>7</i>	<i>3 1/4</i>	<i>39 1/2</i>	<i>3</i>	<i>2 1/8</i>	<i>25 1/4</i>	<i>3</i>
"	<i>1 1/16</i>	<i>25 1/8</i>	<i>7</i>	<i>4 1/2</i>	<i>42</i>	<i>3</i>	<i>2 1/2</i>	<i>25 3/4</i>	<i>3</i>
"	<i>1 1/2</i>	<i>26</i>	<i>7</i>	<i>5 1/2</i>	<i>44</i>	<i>2</i>	<i>2 3/4</i>	<i>26 1/4</i>	<i>3</i>
"				<i>5 1/2</i>	<i>44</i>	<i>2</i>			

size of Feed pumps
size of Btge pumps
size of Bilge suction in Engine Room
In Holds, &c.
Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size
bilge suction pipes fitted with roses Are the roses in Engine room always accessible
connections with the sea direct on the skin of the ship Are they Valves or Cocks
fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line
each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate
are carried through the bunkers How are they protected
pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
new Shaft Tunnel watertight Is it fitted with a watertight door worked from

RS, &c. — (Letter for record *S 1/2*) Manufacturers of Steel *North Bros. Co.*
Heating Surface of Boilers *1766* Is Forced Draft fitted *No* No. and Description of Boilers *2 Cylindrical Single ended*
Pressure *155 lbs* Tested by hydraulic pressure to *232.5 lbs* Date of test *3-1-17* No. of Certificate *15*
boiler be worked separately Area of fire grate in each boiler *Oil fuel* No. and Description of Safety Valves to
2 Spring loaded Area of each valve *9.621* Pressure to which they are adjusted
Distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers *24* inches length *10-0* Material of shell plates *Steel*
3/32 Range of tensile strength *62700* 71600 lbs Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *D.R.L.A.P.*
7.R.D.B.5 Diameter of rivet holes in long. seams *1 1/16* Pitch of rivets *6 29/32* Lap of plates or width of butt straps *1 1/2*
rivets *98* Working pressure of shell by rules *170 lbs* Size of manhole in shell *12" x 16"*
plates *8 x 6*
compensating ring *36" x 32" x 7/8* No. and Description of Furnaces in each Boiler *Two Monitors* Material *Steel* Outside diameter *40"*
plain part Thickness of plates crown *3 1/2* Description of longitudinal joint *Welded* No. of strengthening rings *Compound*
bottom *3 1/2*
Pressure of furnace by the rules *157.5* Combustion chamber plates: Material *Steel* Thickness: Sides *19 1/2* Back *19 1/2* Top *19 1/2* Bottom *3 1/4*
ays to ditto: Sides *7 1/2 x 7 1/2* Back *7 1/2 x 7 1/2* Top *7 1/2 x 7 1/2* If stays are fitted with nuts or riveted heads *Welded heads* Working pressure by rules *160.5 lbs*
stays *Steel* Diameter at smallest part *1 1/2* Area supported by each stay *7 1/2 x 7 1/2* Working pressure by rules *157.5* End plates in steam space
pin *Steel* Thickness *15 1/16* Pitch of stays *15 1/2 x 15* How are stays secured *D.Nuts* Working pressure by rules *170 lbs* Material of stays *Steel*
t smallest part *2 1/2* Area supported by each stay *15 1/2 x 15* Working pressure by rules *163.5* Material of Front plates at bottom *Steel*
3 1/4 Material of Lower back plate *Steel* Thickness *1 1/16* Greatest pitch of stays *3" x 7 1/2* Working pressure of plate by rules *228 lbs*
tubes *2 1/2* Pitch of tubes *3 1/2 x 3 3/8* Material of tube plates *Steel* Thickness: Front *3/8* Back *3/8* Mean pitch of stays *10 1/2 x 10 7/8*
s wide water spaces *13"* Working pressures by rules *193.5 lbs* Girders to Chamber tops: Material *Steel* Depth and
t girder at centre *8" x 1 1/16* Length as per rule *20* Distance apart *7 1/2* Number and pitch of stays in each *3 - 7 1/2*
ressure by rules *207 lbs* Steam dome: description of joint to shell *No. fitted* % of strength of joint *0* Diameter
of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets
ressure 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? No If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— _____

The foregoing is a correct description,

W.A. Fletcher Co.

Manufacturer.

by W.A. Fletcher Vice Pres.

Dates of Survey while building { During progress of work in shops -- Jul. 7. 13. 18. 31. Sep. 11. Nov. 22. 29. Dec. 18. 23. 30. 31. 1916. Feb. 7. 14. Mar. 6. 29. Apr. 2. 7. 12. 14. 18. 20. 23
During erection on board vessel --- May 7. 22. 26. 29. June 5. 11. Sep. 20. 27. Oct. 8. 13. 15
Total No. of visits _____ Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Casings 7/14/1917 Rotors 11/6/17 Blading 11/6/17 Gearing _____

Rotor shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested 4/10/16 Engine and boiler seatings _____ Engines holding down bolts _____

Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material and tensile strength of Rotor shaft Open heart Steel 62720/71600 Identification Mark on Do. 1741 W.T.S.

Material and tensile strength of Pinion shaft _____ Identification Mark on Do. _____

Material of Wheel shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes Welder Steel Test pressure 540 lbs

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 a duplicate of a previous case Yes If so, state name of vessel % Albert Watts

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

These Boilers and Turbines have been constructed under Special Permit and in accordance with the plans submitted and approved by the Committee in the letter E 26.5.16 & 23.2.16. The materials have been tested as required by the Rules and the workmanship is of good quality. They have now been despatched for fitting on board at Baltimore.

The amount of Entry Fee ... £ : : When applied for, 6/11/1917
Special ... £ \$104.00 : : When received, 22/11/1917
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : NY \$10.00

Committee's Minute New York NOV 27 1917

Assigned See other rpt (Bal 2221)