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# REPORT ON MACHINERY.

No. 15854

of writing Report *Nov 20<sup>th</sup> 1918* When handed in at Local Office

Received at London Office *Dec 30<sup>th</sup> 1918*

in Survey held at *Kearny, N.J.*

Port of *New York.*

Date, First Survey *Oct 8<sup>th</sup> 1918*

Last Survey *Nov 11<sup>th</sup> 1918*

on the *Single Screw Steamship "Federal"*

(Number of Visits)

Gross *6868.79*  
Tons Net *4809.92*

ster *A.W. Pratt* Built at *Kearny, N.J.* By whom built *Federal S. B. Co.*

When built *1918-11*

ines made at *Schenectady, N.Y.* By whom made *General Electric Co.*

when made *1918-11*

lers made at *Kearny, N.J.* By whom made *Federal S. B. Co.*

when made *1918-11*

istered Horse Power *619.2 N.H.P.* Owners *U.S. Shipping Board*

ft Horse Power at Full Power *2500*

Is Refrigerating Machinery fitted for cargo purposes *No.*

Port belonging to *Kearny, N.J.*

Is Electric Light fitted *Yes.*

BINE ENGINES, &c.—Description of Engines *Geared Turbine* TURBINE NO. *13430* GEAR NO. *2997* No. of Turbines *One.*

eter of Rotor Shaft Journals, H.P. *8"* L.P. *✓*

Diameter of Pinion Shaft *4"*

eter of Journals *H.S. PINION - 7"* GEAR - *16"*

Distance between Centres of Bearings *H.S. PINION - 25"* GEAR - *24.5"*

Diameter of Pitch Circle *H.S. PINION - 4.833"* GEAR - *54.666"*

eter of Wheel Shaft *14"*

Distance between Centres of Bearings *L.S. PINION 52"*

Diameter of Pitch Circle of Wheel *L.S. PINION - 10.75"* GEAR - *54.75"*

of Face *14.35"*

Diameter of Thrust Shaft under Collars *13.75"*

Diameter of Tunnel Shaft as per rule *12.48"* as fitted *13"*

Screw Shafts *One*

Diameter of same as per rule *13.37"* as fitted *14.25"*

Diameter of Propeller *17'0"*

Pitch of Propeller *13'1"*

Blades *4*

State whether Moveable *Not.*

Total Surface *74.140'*

Diameter of Rotor Drum, H.P. *✓* L.P. *✓* Astern *✓*

ess at Bottom of Groove, H.P. *✓* L.P. *✓* Astern *✓*

Revs. per Minute at Full Power, Turbine *33 1/4* Propeller *90 R.P.M.*

## Particulars of Blading.

	ACTIVE			L.P.			ASTERN.		
	HEIGHT OF BLADES.	H.P. PITCH DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	L.P. DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	ASTERN DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION .....	<i>75-1.25"</i>	<i>2' 11 1/2"</i>	<i>2</i>				<i>8125-1.75</i>	<i>3' 3"</i>	<i>2</i>
" .....	<i>6.25</i>	<i>3' 9"</i>	<i>1</i>				<i>3.875</i>	<i>3' 3"</i>	<i>1</i>
" .....	<i>1.25</i>	<i>3' 10 1/2"</i>	<i>1</i>						
" .....	<i>2.5</i>	<i>4' 0"</i>	<i>1</i>						
" .....	<i>6.0</i>	<i>4' 2"</i>	<i>1</i>						
" .....									
" .....									
" .....									
" .....									

d size of Feed pumps *Two Davidson type - 10" x 7" x 24"*

l size of Bilge pumps *Three - 6" x 5 1/4" x 6" - 12" x 8 1/2" x 12" - 12" x 10 1/4" x 12"*

l size of Bilge suction in Engine Room *Three - 3 1/2" Tunnel well One - 3"*

N<sup>o</sup> 4. *Two - 3"* N<sup>o</sup> 5. *Two - 3"* + *2 - 3" Emergency* In Holds, &c. *N<sup>o</sup> 1. One - 3"* N<sup>o</sup> 2. *One - 3"* N<sup>o</sup> 3. *Two - 3"*

ilge Injections *One size 10"* Connected to condenser, or to circulating pump *but pumps a separate Donkey Suction fitted in Engine Room & size Yes. 3 1/2"*

the bilge suction pipes fitted with roses *Yes.* Are the roses in Engine room always accessible *Yes.*

connections with the sea direct on the skin of the ship *Yes.* Are they Valves or Cocks *Both.*

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 *Below.*

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.*

pes are carried through the bunkers *None.* How are they protected *Yes.*

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes.*

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *Yes.*

rew Shaft Tunnel watertight *Yes.* Is it fitted with a watertight door *Yes.* worked from *Top platform.*

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

Heating Surface of Boilers *89340* Is Forced Draft fitted *Yes.* No. and Description of Boilers *3. S.C. Scotch Marine.*

g Pressure *210 lbs. per sq. in.* Tested by hydraulic pressure to *315 lbs. per sq. in.* Date of test *23-9-18, 29-9-18, 3-10-18.* No. of Certificate *P. 72. C. 77. S. 16.*

boiler be worked separately *Yes.* Area of fire grate in each boiler *Oil-fired* No. and Description of Safety Valves to *Are they fitted with easing gear Yes.*

Two-3 1/2" brane. Area of each valve *9.624* Pressure to which they are adjusted *210 lbs. per sq. in.* Material of shell plates *C.H. Steel.*

distance between boilers or uptakes and bunkers or woodwork *14"* Mean dia. of boilers *15'6"* Length *11'6"* Material of shell plates *C.H. Steel.*

Range of tensile strength *60/71680 lbs.* Are the shell plates welded or flanged *✓* Descrip. of riveting: cir. seams *D.P. Lap.*

J.R.R. B.S. Diameter of rivet holes in long. seams *1 5/8"* Pitch of rivets *9 3/8"* Lap of plates or width of butt straps *23 3/8"*

ges of strength of longitudinal joint rivets *100-1* plates *82-6* Working pressure of shell by rules *237 lbs. per sq. in.* Size of manhole in shell *23" x 19"*

compensating ring *38" x 34" x 1 1/4"* No. and Description of Furnaces in each Boiler *3. Morison* Material *Steel* Outside diameter *49 5/16"*

plain part top *✓* bottom *✓* Thickness of plates crown *2 1/32"* Description of longitudinal joint *Welded* No. of strengthening rings *Conn.*

pressure of furnace by the rules *217 lbs.* Combustion chamber plates: Material *Steel* Thickness: Sides *5/8"* Back *5/8"* Top *5/8"* Bottom *1"*

stays to ditto: Sides *6 1/2" x 7"* Back *6 1/2" x 7"* Top *8" x 7"* If stays are fitted with nuts or riveted heads *Riveted Heads* Working pressure by rules *240 lbs.*

of stays *Steel* Diameter at smallest part *1.26"* Area supported by each stay *7' x 6 1/2"* Working pressure by rules *221 lbs.* End plates in steam space

Thickness *1 3/16"* Pitch of stays *17 1/2" x 16"* How are stays secured *dbl. Nuts* Working pressure by rules *225 lbs.* Material of stays *Steel.*

at smallest part *3"* Area supported by each stay *17 1/2" x 16"* Working pressure by rules *221 lbs.* Material of Front plates at bottom *Steel.*

Material of Lower back plate *Steel* Thickness *1 1/16" - 5/8"* Greatest pitch of stays *13" x 7"* Working pressure of plate by rules *235 lbs.*

of tubes *2 3/4"* Pitch of tubes *3 3/4" + 4"* Material of tube plates *Steel* Thickness: Front *25/32"* Back *25/32"* Mean pitch of stays *12" x 7 1/2"*

ss wide water spaces *13"* Working pressures by rules *230 lbs. per sq. in.* Girders to Chamber tops: Material *Steel* Depth and

of girder at centre *10" x 1 3/4"* Length as per rule *2' 10"* Distance apart *8"* Number and pitch of stays in each *4 - 7"*

pressure by rules *262 lbs.* Steam dome: description of joint to shell *✓* % of strength of joint *✓* Diameter

of shell plates *Material.* Description of longitudinal joint *✓* Diameter of rivet holes *✓* Pitch of rivets

pressure of shell by rules *✓* Crown plates: Thickness *✓* How stayed *✓*

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Lloyd's Register  
Foundation



