

REPORT ON MACHINERY.

No. 17563

Received at London Office

Date of writing Report Oct. 15 1919 When handed in at Local Office 27/10/19 Port of New York
No. in Survey held at Kearny, N. J. Date, First Survey 4 June Last Survey Oct. 16 1919
Reg. Book. on the Sin. Soc. St. Ste. "ANACONDA." (Number of Visits _____) Tons { Gross 6517
Net 4045
Master N. W. Reed Built at Kearny, N. J. By whom built Federal S. B. Co. When built 1919-10
Engines made at Indianapolis Ind. By whom made Midwest Engine Co. when made 1919-10
Boilers made at Kearny, N. J. By whom made Federal S. B. Co. when made 1919-10
Registered Horse Power 645.6 Owners U. S. Shipping Board Port belonging to Kearny
Shaft Horse Power at Full Power 2800 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c. Description of Engines Geared Turbines Turbine No. 32795 No. of Turbines Two
Diameter of Rotor Shaft Journals, H.P. 4" L.P. 4" Diameter of Pinion Shaft 5"
Diameter of Journals 5" Distance between Centres of Bearings 28 1/2" Diameter of Pitch Circle 51 25/32"
Diameter of Wheel Shaft 16 1/4" to 14 1/4" Distance between Centres of Bearings 44" Diameter of Pitch Circle of Wheel 93 5/8"
Width of Face 26" Diameter of Thrust Shaft under Collars 4" 13/32" per approved plan Diameter of Tunnel Shaft 12 9/4"
No. of Screw Shafts One Diameter of same as per rule 14 23/32" Diameter of Propeller 17'0" Pitch of Propeller 13'1"
Fitted with continuous one piece liner as fitted 14 25/32"
No. of Blades 4 State whether Moveable No Total Surface 77.17 sq' Diameter of Rotor Drum, H.P. 13 1/16" L.P. 22" HP 22 3/4" L.P. 22 1/4"
Thickness at Bottom of Groove, H.P. Solid L.P. Solid Revs. per Minute at Full Power, Turbine 3600 Propeller 90

PARTICULARS 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 H.P. BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	5 7/8"	14 1/4"	6.	2 1/4"	26 1/2"	2.	19 1/16" - 2 7/8"	27 3/8" - 28"	1. - 1.
2ND	13/16"	14 7/8"	6.	2 3/4"	27 1/2"	2.	29 1/16" - 4 1/4"	28 7/8" - 29"	1. - 1.
3RD	1 1/16"	15 1/8"	5.	3 1/2"	29"	2.	3 3/8" - 5 3/4"	29" - 31	1. - 1.
4TH	1 3/8"	15 3/4"	5.	4 3/8"	30 3/4"	2.			
5TH	1 1/8"	18 1/4"	3.	5"	32"	4.			
6TH	17/16"	18 7/8"	3.						
7TH	17/8"	19 3/4"	3.						
8TH	2 3/8"	20 3/4"	3.						

No. and size of Feed pumps Two 10" x 7" x 24" Davidson type
No. and size of Bilge pumps Three 6" x 5 3/4" x 6" - 14" x 8 1/2" x 12" - 12" x 10 1/4" x 12"
No. and size of Bilge suction in Engine Room Three 3 1/2" Tunnel well. One 3"
In Holds, &c. No. 1. One 3" No. 2. One 3" No. 3. Two 3" No. 4. Two 3"
No. 5. Two 3" & Two 3" Emergency screw-down non return valves in Ford holds
No. of Bilge Injections One size 10" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine Room & size Yes 3 1/2"
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
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 Below
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 How are they protected
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 Top platform

BOILERS, &c. (Letter for record S) Manufacturers of Steel Carnegie & Illinois Steel Co.
Total Heating Surface of Boilers 8934 Is Forced Draft fitted Yes No. and Description of Boilers 3 S.E. Scotch Marine
Working Pressure 210 lbs Tested by hydraulic pressure to 315 lbs Date of test 19-7-19 - 25-9-19 No. of Certificate 238-239-240
Can each boiler be worked separately Yes Area of fire grate in each boiler 61.80 No. and Description of Safety Valves to each boiler Two 3 1/2" Grane Area of each valve 9.62 sq' Pressure to which they are adjusted 210 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 14" Mean dia. of boilers 15'6" Length 11'6" Material of shell plates Steel
Thickness 1 1/16" Range of tensile strength 60/71680 lbs per sq' Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams D. R. Lap
long. seams J. R. D. 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"
rivets 100.1 Working pressure of shell by rules 237 lbs Size of manhole in shell 23 x 19"
plates 82.6

Size of compensating ring 38" x 34" x 1 1/4" No. and Description of Furnaces in each Boiler 3 Morrison Material Steel Outside diameter 49 9/16"
Length of plain part top 1" Thickness of plates crown 2 1/32" Description of longitudinal joint Welded No. of strengthening rings Corr.
bottom 1"
Working 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"
Pitch of 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 Cir. heads Working pressure by rules 240 lbs
Material of stays Steel Diameter at smallest part 1 26" Area supported by each stay 6 1/2" x 7" Working pressure by rules 221 lbs End plates in steam space
Material Steel Thickness 1 3/16" Pitch of stays 17 1/2" x 16" How are stays secured Double nuts Working pressure by rules 225 lbs Material of stays Steel
Diameter at smallest part 3" Area supported by each stay 17 1/2" x 16" Working pressure by rules 227 lbs Material of Front plates at bottom Steel
Thickness 25/32" Material of Lower back plate Steel Thickness 1 1/16" x 5/8" Greatest pitch of stays 13" x 7" Working pressure of plate by rules 235 lbs
Diameter of tubes 2 3/4" Pitch of tubes 3 3/4" x 4" Material of tube plates Steel Thickness: Front 25/32" Back 25/32" Mean pitch of stays 12" x 7 1/2"
Pitch across wide water spaces 13" Working pressures by rules 230 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10" x 13 1/4" Length as per rule 2'10" Distance apart 8" Number and pitch of stays in each Four 7"
Working pressure by rules 262 lbs Steam dome: description of joint to shell _____ % of strength of joint _____ Diameter _____
Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diameter of rivet holes _____ Pitch of rivets _____
Working pressure of shell by rules _____ Crown plates: Thickness _____ How stayed _____

SUPERHEATER. Type *Milne* Date of Approval of Plan *26-12-17* Tested by Hydraulic Pressure to *630 lbs. per sq. in.*Date of Test *FINAL - 22-9-19* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *Yes*Diameter of Safety Valve *1"* Pressure to which each is adjusted *225 lbs. per sq. in.* Is Easing Gear fitted *Yes*IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:—*Two studs & nuts H.L.P. Rotor Bearings. Two studs & nuts each size Pinion & Gear Bearing. Complete set of coupling bolts, set of Bearing bushes for each Rotor, Pinion & Gear shaft. Set of shoes for H.P.L.P. & main Thrust Bearings. Set of Liners. Set of Labynth rings (packing) Three carbon packing rings One H.S. Pinion. Five per cent of Turbine & Gear casing joints, studs, bolts & nuts. One set of Feed-Bridge & Lubr. oil pump valves. Two thermometers for oil circ. system. Bkt & rod Lubr. oil pump. Escape valve springs for each size used. 6.5 Propeller, Number of Bls. superheater, oil cooler & condenser tubes. Two Bl. feed check valves. Quantity of assorted bolts, studs, nuts, bars & plates of iron & steel.*

The foregoing is a correct description,

Federal Shipbuilding Co.,

Manufacturer.

Per pro. *Dan O. Gardner* Ch. Eng. Drafts.

Dates of Survey while building { During progress of work in shops -- } *1919 Jan 4 July 16 17 22 28 Aug 5 9 11 12 13 14 20 27 Sep 4 5 6 8 17 22 24 25 26*
 { During erection on board vessel --- } *Oct 1 5 8 9 14 16*
 Total No. of visits *28*

Is the approved plan of main boiler forwarded herewith *Retained for Reference.*" " " donkey " " " *✓*Dates of Examination of principal parts—Casings *✓* Rotors *✓* Blading *✓* Gearing *✓*Rotor shaft *✓* Thrust shaft *✓* Tunnel shafts *3-9-19* Screw shaft *12-8-19* Propeller *12-8-19*Stern tube *11-8-19* Steam pipes tested *10-10-19* Engine and boiler seatings *22-7-19* Engines holding down bolts *8-10-19*Completion of pumping arrangements *15-10-19* Boilers fired *8-10-19* Engines tried under steam *15-10-19*Main boiler safety valves adjusted *16-10-19* Thickness of adjusting washers *not used.*Material and tensile strength of Rotor shaft *✓* Identification Mark on Do. *"*Material and tensile strength of Pinion shaft *✓* Identification Mark on Do. *✓*Material of Wheel shaft *Steel* Identification Mark on Do. *W.L. 1739* Material of Thrust shaft *Steel* Identification Mark on Do. *W.L.*Material of Tunnel shafts *Steel* Identification Marks on Do. *C.F.M. 436* Material of Screw shafts *Steel* Identification Marks on Do. *C.F.M. 436*Material of Steam Pipes *Steel* Test pressure *630 lbs. per sq. in.*Is an installation fitted for burning oil fuel *No.* 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 *S/S. Belfort. N.Y. Rept.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Turbines & Gears have been built under survey of the American Bureau of Shipping. The Gear materials have been tested & examined by Lloyd's Surveyors. The Boilers have been built under special survey in accordance with approved plans (12-1-18). The workmanship & materials are good & efficient. On completion the Boilers satisfactorily withstood a hydrostatic test of 315 lbs. The whole of the machinery has now been efficiently placed on board & examined under working conditions & proved satisfactory. The case is submitted for the notation of L.M.C (1919-10) in the Register Book.*

The amount of Entry Fee *£ 15.00*Special *£ 261.40*Donkey Boiler Fee *£ :*Travelling Expenses (if any) *£ :*

When applied for,

30 Oct 1919

When received,

*8/11/19**C. F. Macdonald.*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York OCT 28 1919

Assigned

*L.M.C. 10.19*RECEIVED
27-10-19

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Foundation