

# REPORT ON MACHINERY.

Received at London Office

REC. AUG. 31 1921

Date of writing Report 16th August 1921 When handed in at Local Office 10/8/21 in Port of New York

No. in Survey held at Kearny, New Jersey Date, First Survey 25 June 20 Last Survey 3rd August 1921

Reg. Book. on the Twin Screw Steel Oil Tanker, J. A. MOFFETT, JR. Hull No. 50 (Number of Visits)

Master G. S. Spinney Built at Kearny, N. J. By whom built Federal Ship Building Co Tons { Gross 10396.61  
Net 7725

Engines made at Kearny, N. J. By whom made Federal Ship Building Co when made 1921

Boilers made at Kearny, N. J. By whom made Federal Ship Building Co when made 1921

INDICATED Registered Horse Power 3500 Owners Standard Oil Co of New Jersey Port belonging to Bayonne

Nom. Horse Power as per Section 28 676 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Vertical Recip. Triple Exp. of Cylinders 3 each No. of Cranks 3

Dia. of Cylinders 20 1/2", 35", 60" Length of Stroke 42" Revs. per minute 90 Dia. of Screw shaft as per rule 12.54" Material of screw shaft S  
as fitted 13"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Two liners 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 Welded 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 liner fits tight If two liners are fitted, is the shaft lapped or protected between the liners protected Length of stern bush 4'-6"

Dia. of Tunnel shaft as per rule 11.3" Dia. of Crank shaft journals as per rule 11.9" Dia. of Crank pin 12" Size of Crank webs 24"x8 1/4" Dia. of thrust shaft under collars 12" Dia. of screw 15'-0" Pitch of Screw 14'-2" No. of Blades 3 State whether (moveable) Yes Total surface 50.292 sq ft each

INDEP. No. of Feed pumps 3 Diameter of ditto 12"x8" Stroke 24" Can one be overhauled while the other is at work Yes

INDEP. No. of Bilge pumps 3 Diameter of ditto 8 1/2"x8" Stroke 12" Can one be overhauled while the other is at work Yes

INDEP. No. of Donkey Engines 1 Sizes of Pumps 8"x5"x12" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 8-3 1/2" Engine + Stokehold In Holds, &c. 4-6" Cargo pump room

2-2 1/2" Forward pump room 2-2 1/2" Forward Hold

No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump C.P. 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 the sluices on Engine room bulkheads always accessible No sluices

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 Steam + hot. to pump room + deck machy How are they protected Boxed in with steel plate

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 inserted from No Tunnel Machy. Aft.

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

Total Heating Surface of Boilers 9618 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 Multi Single Ended Scotch

Working Pressure 210 lbs Tested by hydraulic pressure to 315 lbs Date of test 26-1-21 No. of Certificates 402  
9-2-21 403  
18-2-21 404

Can each boiler be worked separately Yes Area of fire grate in each boiler Oil burning No. and Description of Safety Valves to each boiler 1-3 1/2" Twin Spring Area of each valve 9'62" Pressure to which they are adjusted 215 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 36" INSIDE Mean dia. of boilers 16'-0" Length 11'-6" Material of shell plates S

Thickness 1/2 1/2" Range of tensile strength 26.8 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. LAP.  
long. seams TR/DBS Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9/16" Lap of plates or width of butt straps 23 3/4"

Per centages of strength of longitudinal joint rivets 105.5 Working pressure of shell by rules 228# Size of manhole in shell 16"x12"  
plate 81.8

Size of compensating ring 37"x33" No. and Description of Furnaces in each boiler 4 Morrison Material S Outside diameter 44 1/4"

Length of plain part top Yes Thickness of plates crown 5/8" Description of longitudinal joint Welded No. of strengthening rings Yes  
bottom Yes bottom 5/8"

Working pressure of furnace by the rules 215# Combustion chamber plates: Material S Thickness: Sides 1 1/16" Back 3/4" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 7 1/2"x7 1/4" Back 8"x8" Top 7 1/2"x7 1/4" If stays are fitted with nuts or riveted heads Rest Rivetted Working pressure by rules S: 222#  
S: 54.375" S: 298#  
S: 64.375" S: 253#  
S: 54.375" S: 298#

Material of stays S Area at smallest part 1.8" Area supported by each stay 232.5" Working pressure by rules 217# Material of stays S

Material S Thickness 1 1/16" Pitch of stays 15 1/2"x15" How are stays secured D. NUTS Working pressure by rules 217# Material of stays S

Area at smallest part 5.9" Area supported by each stay 232.5" Working pressure by rules 266# Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 1" Greatest pitch of stays 13"x8" Working pressure of plate by rules 220#

Diameter of tubes 2 3/4" Pitch of tubes 4"x3 3/4" Material of tube plates S Thickness: Front 1" Back 13/16" Mean pitch of stays 12"x7 1/2"

Pitch across wide water spaces 13" Working pressures by rules F: 212# Girders to Chamber tops: Material S Depth and thickness of girder at centre 10"x7 1/8"x2 Length as per rule 35" Distance apart 7 1/2" Number and pitch of stays in each 4 @ 7 1/4"

Working pressure by rules 272# Steam dome: description of joint to shell Yes % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Yes 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? *Yes.*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— 1 propeller shaft, 2 propellers complete, 1 crank shaft section, 3 valve stems with link blocks, 3 eccentric straps with bolts & nuts, 1 set of bottom end bearings, 1 set of top end bearings, 2 top end & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of rings & springs for H.P. I.P. & L.P. pistons, 12 cylinder cover studs & nuts, 6 relief valve springs, 2 sets of coupling bolts & nuts, 35 boiler tubes, 8 tube stoppers, 4 safety valve springs, 3 check valves, 1 set each feed & bilge pump valves & springs, 25 condenser tubes, 100 ferrules & packing, baffle plates, bearers & firebars complete for each boiler, assorted bolts & nuts & round iron bars.

The foregoing is a correct description,

FEDERAL SHIPBUILDING CO. ENGINE DEPARTMENT.

*John J. Dalcher*

Manufacturer.

Dates of Survey while building	During progress of work in shops	1920: Jun 25, July 13, Oct 12, 5, 7, 9, 11, 13, 14, 15, 18, 19, 23, 25, 27, 28, 29, Nov 2, 4, 9, 11, 15, 17, 18, 19, 22, 23, 24, 29, 30, Dec 1, 3, 4, 6, 7, 9, 12, 13
	During erection on board vessel	14, 17, 18, 20, 21, 22, 23, 24, 27, 29, 30, 31, 1921: Jan 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 31, Feb 1, 5, 7, 10, 11, 15, 17, 20, 21, 22, 23, 24, 25, 29, 30, 1922: Mar 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Apr 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, May 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Jun 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Jul 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Aug 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Sep 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Oct 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Nov 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Dec 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31
Total No. of visits		167

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	25-6-21	Slides	25-6-21	" donkey "	"	"	"
Connecting rods	25-6-21	Crank shafts	9-6-21	Thrust shafts	24-6-21	Tunnel shafts	11-7-21
Stern tubes	5-6-21	Steam pipes tested	29-6-21	Engine and boiler seatings	14-7-21	Screw shafts	6-7-21
Completion of pumping arrangements	2-8-21	Boilers fixed	23-7-21	Engines holding down bolts	28-7-21	Propellers	9-7-21
Completion of fitting sea connections	14-7-21	Stern tubes	12-7-21	Engines tried under steam	30-7-21	Rods	24-6-21
Main boiler safety valves adjusted	1-8-21	Thickness of adjusting washers	1 3/4" 1 3/4"	Screw shafts and propellers	13-7-21		
Material of Crank shafts	S	Identification Mark on Do.	S. No. 10, 8-7-21	Material of Thrust shafts	S	Identification Mark on Do.	S. No. 10, 9-7-21
Material of Tunnel shafts	S	Identification Marks on Do.	S. No. 12, 7-21	Material of Screw shafts	S	Identification Marks on Do.	S. No. 16, 20-6-21
Material of Steam Pipes	Open hearth seamless steel	Test pressure	630 lbs				

Is an installation fitted for burning oil fuel *Yes.* Is the flash point of the oil to be used over 150°F. *Yes.*

Have the requirements of Section 49 of the Rules been complied with *Yes.*

Is this machinery duplicate of a previous case *Yes.* If so, state name of vessel *S/S. WALTER JENNINGS, Hull #7.*

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

The above Engines & Boilers have been constructed under Special Survey in accordance with the approved plans. The material and workmanship employed in their manufacture so far as can be seen are sound and good and proved satisfactory under test. They have been fitted on board the Vessel in an efficient manner and gave satisfaction on the sea trial. They are eligible in my opinion to the notation in the Register Book + L.M.C. Fitted for oil fuel. 8-21. Flash point above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8-21 F.D. CL.

Fitted for Oil Fuel 8-21 F.P. above 150°F

*Loell*

*J.M. 3/9/21*

The amount of Entry Fee	\$ 30.00	When applied for,	10/8/21 19
Special Survey Fee	\$ 544.00	When received,	26/9/21 1921
Donkey Boiler Fee	"		
Travelling Expenses (if any)	"		

*J. Hockhart*

Engineer Surveyor to Lloyd's Register of Shipping.

New York AUG 16 1921

Assigned + LMC-8-21

MACHINERY CERT. WRITTEN 31/8/21 ISSUED 19/9/21

