

REPORT ON MACHINERY

Received at London Office

Date of writing Report 31st Aug 1916 When handed in at Local Office 31st Aug 1916 Port of Philadelphia Pa

No. in Survey held at Philadelphia Date, First Survey 8th July 1915 Last Survey 14th Aug 1916

Reg. Book on the S.S. "J. M. Danziger" (Number of Visits 68)

Master Built at Philadelphia By whom built The Wm Cramp & Co. B. Co. (Gross Tons 428) When built 1916

Engines made at Philadelphia By whom made The Wm Cramp & Co. B. Co. when made 1916

Boilers made at Do By whom made Do when made 1916

Registered Horse Power Owners Petroleum Transport Co Port belonging to Los Angeles

Nom. Horse Power as per Section 28 565 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 27" 45 1/2" 76" Length of Stroke 51" Revs. per minute 78 Dia. of Screw shaft as per rule 15 1/2" Material of screw shaft Steel

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 Yes 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 5'-9"

Dia. of Tunnel shaft as per rule 13.96 Dia. of Crank shaft journals as per rule 14.65 Dia. of Crank pin 15 1/2" Size of Crank webs 10 1/4" Dia. of thrust shaft under collars 15" Dia. of screw 17.9" Pitch of Screw 16.0" No. of Blades 4 State whether moveable Yes Total surface 100 sq ft

No. of Feed pumps 2 Diameter of ditto 12 1/8" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 25 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps per over page No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Blr Room: 4-3 1/2" 2-3" x 1 pipe 4" In Holds, &c. 2-3 1/2" in fore hold: 1-2 1/2" in fore pump room 1-3" in chain locker: 1-3" ejector in after pump room

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes - 4"

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 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 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 coffee dam suction How are they protected steel pipe

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 None Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record (+)) Manufacturers of Steel Dorr Bros

Total Heating Surface of Boilers 8095 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 single Ended

Working Pressure 190 lbs Tested by hydraulic pressure to 285 lbs Date of test 24.5.16 No. of Certificate 96

Can each boiler be worked separately Yes Area of fire grate in each boiler 61.8 sq ft No. and Description of Safety Valves to each boiler Double Spring loaded Area of each valve 9.6 sq in Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 15-3" Length 11-6 3/4" Material of shell plates steel

Thickness 1 1/32" Range of tensile strength 58.32 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. Riv. long. seams T. R. O. B. J. Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 7 3/4" Lap of plates or width of butt straps 2 1/2"

Per centages of strength of longitudinal joint rivets 88.6 Working pressure of shell by rules 200 Size of manhole in shell 16" x 12"

Size of compensating ring 37 1/2" x 35 1/2" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 49 1/4"

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

Working pressure of furnace by the rules 204 Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 7 1/4" x 6 1/2" Back 7 3/4" x 6 3/8" Top 6 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Yes No Working pressure by rules 198

Material of stays iron Area at smallest part 1.81 Area supported by each stay 50.4 Working pressure by rules 269 End plates in steam space: Material steel Thickness 1 1/8" Pitch of stays 6 5/8" x 15 3/4" How are stays secured D. Nuts Working pressure by rules 216 Material of stays steel

Area at smallest part 5.94 Area supported by each stay 262 Working pressure by rules 235 Material of Front plates at bottom steel

Thickness 3/4" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 234

Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 3/4" Material of tube plates steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 9 1/4"

Pitch across wide water spaces 13" Working pressures by rules 224 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 1/4" x 20 3/4" Length as per rule 34" Distance apart 7 1/2" Number and pitch of stays in each 14 @ 6 1/2"

Working pressure by rules 206 Steam dome: description of joint to shell % of strength of joint

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

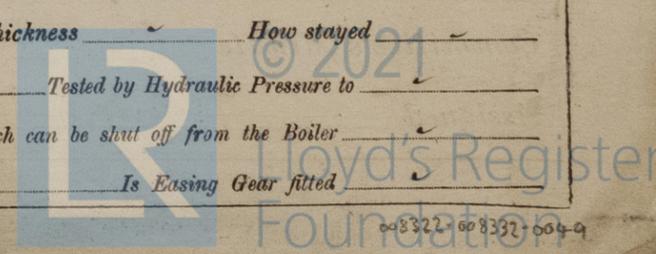
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type 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

If not, state whether, and when, one will be sent



IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of bilge pump ^{feed pump and air pump} valves: a quantity of assorted bolts & nuts: iron of various sizes. 1 Propeller shaft, 2 propeller blades, 12 Condenser tubes 1 Impeller shaft for circulating pump: 1 set of piston rings etc.

The foregoing is a correct description,
 THE W.M. CRAMP & SONS SHIP & ENGINE BUILDING CO.
 J. F. Metten c.e. Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1915 July 8. 19. 26. 28. Aug 2. Sept 18. 21. 24. 28. 29. Oct 6. 8. 12. 14. 16. 21. 27 up to June 13 - 1916
 During erection on board vessel --- July 7. 12. 19. 28. 31. Aug. 8. 13. 14.
 Total No. of visits 68

Is the approved plan of main boiler forwarded herewith yes
 " " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 24. 9. 15 Slides 31. 1. 16 Covers 31. 1. 16 Pistons 3. 2. 16 Rods 24. 1. 16
 Connecting rods 19. 1. 16 Crank shaft 22. 11. 15 Thrust shaft 31. 1. 16 Tunnel shafts 8. 10. 15 Screw shaft 28. 12. 15 Propeller 27. 3. 16
 Stern tube 21. 3. 16 Steam pipes tested 20. 7. 16 Engine and boiler seatings 21. 3. 16 Engines holding down bolts 2. 6. 16
 Completion of pumping arrangements 14. 8. 16 Boilers fixed 8. 8. 16 Engines tried under steam 15. 8. 16
 Completion of fitting sea connections 8. 6. 16 Stern tube 8. 6. 16 Screw shaft and propeller 8. 6. 16
 Main boiler safety valves adjusted 14. 8. 16 Thickness of adjusting washers lock nuts fitted

Material of Crank shaft Steel Identification Mark on Do. 1390 Material of Thrust shaft Steel Identification Mark on Do. 1390
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 1390
 Material of Steam Pipes Steel Test pressure 570 lbs per sq in
 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 no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. Donkey Engine: 14 x 10 1/4 x 12; 6 x 5 3/4 x 6)
5 1/4 x 4 3/4 x 5; 6 x 5 3/4 x 6; 2 @ 6 x 3 1/2 x 6; 8 x 10 x 10 x 12.

The machinery of this vessel has been built under special survey the material & workmanship being good, and proved satisfactory on steam trial

It is submitted that this vessel be eligible for a record of + L.M.C. 8.16 in the Register Book

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.16. F.D.

JWD. 7/10/16. [Signature]

The amount of Entry Fee ... \$ 15.00: When applied for, 19
 Special ... \$ 241.25
 Donkey Boiler Fee ... £ : : When received, 30 Oct 1916
 Travelling Expenses (if any) \$ 7.00

A. T. Thomas Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York SEP 21 1916

Assigned + L.M.C. 8.16 Elec Light

Machinery Certificate No. 5-10-16



The Surveyors are requested not to write on or below the space for Committee's Minute.