

REPORT ON MACHINERY.

No. 2349.

Port of SAN FRANCISCO,

Received at London Office MON 31 JUL 1916

No. in Survey held at San Francisco,

Date, first Survey Nov. 30th/15 Last Survey June 20th 1916.

Reg. Book.

on the Steel Screw Steamer "ACME", Union Iron Works Co's Hull No. 125.

(Number of Visits 41)

Master A.B. Snowden 08-16 Built at San Francisco, By whom built Union Iron Works Co.

Tons { Gross 6895

Net 4308

When built 1916.

Engines made at San Francisco,

By whom made Union Iron Works Company.

when made 1916.

Boilers made at San Francisco,

By whom made Union Iron Works Company.

when made 1916.

Registered Horse Power

Owners Standard Transportation Co. of Port belonging to San Francisco.

Nom. Horse Power as per Section 28 552

Is Refrigerating Machinery fitted for cargo purposes no.

Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders three No. of Cranks 3

Dia. of Cylinders 27" 47" 76" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft as per rule 15.9" Material of 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 - If two

liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 5'6"

Dia. of Tunnel shaft as per rule 14.33 Dia. of Crank shaft journals as per rule 15.05" Dia. of Crank pin 15.5" Size of Crank webs 2'6"x9 1/2" Dia. of thrust shaft under

collars 15 1/2" Dia. of screw 19'3" Pitch of Screw 17'6" No. of Blades 4 State whether moveable yes Total surface 94.80 sq. ft.

No. of Feed pumps 2 Diameter of ditto 11"x8"x26" Stroke vert. simplex Can one be overhauled while the other is at work yes

No. of Bilge pumps 3 Diameter of ditto 2-7"x6x10" Stroke Can one be overhauled while the other is at work yes

No. of Donkey Engines - Sizes of Pumps - No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3-3 1/2" In Holds, &c. 1-3" FP; 2-3" fwd. cargo sapce; 2-3 1/2"

In Pump Room; 2-3 1/2" in Cofferdam; 2-2 1/2" in dry cofferdam; 2-2 1/2" in After Peak.

No. of Bilge Injections 1 sizes 10" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 3-3 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 -

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks All valves.

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 - 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

Dates of examination of completion of fitting of Sea Connections Apr. 28th of Stern Tube Apr. 28th Screw shaft and Propeller Apr 28th

Is the Screw Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Worth Brothers Company.

Total Heating Surface of Boilers 9405 sq. ft. Is Forced Draft fitted no No. and Description of Boilers 3-s.e. Marine Multitubular

Working Pressure 215 lbs. Tested by hydraulic pressure to 325 lbs. Date of test 13.4.15 No. of Certificate 21-22-23

Can each boiler be worked separately yes Area of fire grate in each boiler none No. and Description of Safety Valves to

each boiler 2-spring loaded. Area of each valve 9.6" 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 - Mean dia. of boilers 15'1 19/32" Length 11'9" Material of shell plates steel

Thickness 1-19/32" Range of tensile strength 28.32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DRL

long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1-19/32" Pitch of rivets 10" Lap of plates or width of butt straps 22 3/8"

Per centages of strength of longitudinal joint rivets 88.5 Working pressure of shell by rules 240 Size of manhole in shell 16"x12"

Size of compensating ring flanged in No. and Description of Furnaces in each boiler 3-Morrison Material steel Outside diameter 48 1/16"

Length of plain part top - Thickness of plates crown 21/32" Description of longitudinal joint weld No. of strengthening rings -

Working pressure of furnace by the rules 222.6 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 15/16"

Pitch of stays to ditto: Sides 8x6 3/4" Back 8x6 3/4" Top 8x6 3/4" If stays are fitted with nuts or riveted heads rivetted. Working pressure by rules 224

Material of stays steel Diameter at smallest part 1.75 sq. Area supported by each stay 54 sq. Working pressure by rules 291 End plates in steam space:

Material steel Thickness 1 1/4" Pitch of stays 1 7/8"x16 3/8" How are stays secured D.nuts Working pressure by rules 243 Material of stays steel

Area Diameter at smallest part 7.67 sq. Area supported by each stay 286.56 sq. Working pressure by rules 275 Material of Front plates at bottom steel

Thickness 13/16" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 15" Working pressure of plate by rules 252

Diameter of tubes 3" Pitch of tubes 4-1/8" Material of tube plates steel Thickness: Front 13/16" Back 7/8" Mean pitch of stays 10-5/16"

Pitch across wide water spaces 13" Working pressures by rules 269 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 12" x 1 1/2" Length as per rule 34" Distance apart 8" Number and pitch of stays in each 4-6 3/4"

Working pressure by rules 345 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

Lloyd's Register
Foundation

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 1-tail shaft complete with nut. 1-complete set of piston rings and springs for each cylinder. 2-bottom end bolts and nuts. 2-top end bolts and nuts.

1-set coupling bolts. 1-set of valves for each feed and bilge pump. 1-set of air pump valves. 1-set of crank pin brasses. 1-set of crosshead brasses. 1-set of main bearing bolts. 50-condenser tubes. 2-propeller blades. 1-valve stem. A quantity of assorted bolts and nuts.

The foregoing is a correct description,
 UNION IRON WORKS COMPANY,
 By _____ Manufacturer.

Dates of Survey { During progress of work in shops - Nov. 30th Dec 6th Jan 25 & 29 Feb 1.3.4.9.16.21 Mar 1.10.27.30 Apr. 7.10.13.14
 { During erection on board vessel - Apr. 15.18.19.28.29.
 { while building May 1.2.6.8.11.15.23.26.29.31 June 5.6.9.14.15.18.19.21
 Total No. of visits 41

Copy of _____ is being forwarded herewith.

Dates of Examination of principal parts—Cylinders Jan 25.29 Slides Feb 9 Covers Feb 9 Pistons Feb 9 Rods Feb 16
 Connecting rods Feb 16 Crank shaft Mar 27 Thrust shaft Jan 29 Tunnel shafts Feb 16 Screw shaft Apr 18 Propeller Apr 18
 Stern tube Nov 30 Steam pipes tested June 12 Engine and boiler seatings Apr 28 Engines holding down bolts May 23
 Completion of pumping arrangements June 6th Boilers fixed May 11th Engines tried under steam June 18th
 Main boiler safety valves adjusted June 19 & 20 Thickness of adjusting washers lock nuts. No. 37
 Material of Crank shaft steel Identification Mark on Do. 4-18-16 Material of Thrust shaft steel Identification Mark on Do. 5-5-16 WB No. 28
 Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts Steel Identification Marks on Do. 31.3.16WB No. 24
 Material of Steam Pipes steel Test pressure 645 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery and Boilers were constructed under special survey, of materials tested to Rule requirements and workmanship was found sound throughout. On completion the machinery was tested under all working conditions and found satisfactory.

In the opinion of the under signed the Machinery is eligible to be classed in the Register Book with the notation of *LMC 6-16 Fitted for Oil Fuel 6-16 F.P. above 150°F.

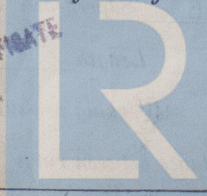
The amount of Entry Fee.. \$ 15.00 : When applied for, June 30.16
 Special .. £ 238.00 :
 Donkey Boiler Fee .. £ - : - :
 Travelling Expenses (if any) £ - : - :
 Sunday fee, .. 10.00 :
 Committee's Minute

TUE. 14 NOV. 1916

Assigned

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

MACHINERY CERTIFICATE WRITTEN.



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