

REPORT ON MACHINERY.

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

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 552 Owners Standard Transportation Co. of Delaware. 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 15.9" Material of steel
as fitted 16.6" screw shaft

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 14.33 Dia. of Crank shaft journals 15.05" Dia. of Crank pin 15.5" Size of Crank webs 2'6x9.5" Dia. of thrust shaft under
collars 15.5" 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
independent

No. of Bilge pumps 3 Diameter of ditto 2-7"x6x10" Stroke - Can one be overhauled while the other is at work yes
1-16x10x14

No. of Donkey Engines - Sizes of Pumps - No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3-3.5" In Holds, &c. 1-3" FP; 2-3" fwd. cargo space; 2-3.5"

In Pump Room; 2-3.5" in Cofferdam; 2-2.5" in dry cofferdam; 2-2.5" 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 3-3.5"

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 9405sq. 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"
plate 84.4

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 21/32" Description of longitudinal joint weld No. of strengthening rings -
bottom -

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 rivettted. Working pressure by rules 224

Material of stays steel Diameter at smallest part 1.75sq" 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 at smallest part 7.67sq" Area supported by each stay 286.56sq" 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 -

Is a Report also sent on the Hull of the Ship? yes If not, state whether, and when, one will be sent?

5810-9001M

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 *W. A. Smith* *President* Manufacturer.

Dates of Survey while building
 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.
 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* approved plan of main boiler 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 Apr 18 Thrust shaft Jan 29 Feb 16 Tunnel shafts - 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.

Certificate (if required) to be sent to The Surveyors, San Francisco.

The amount of Entry Fee.. \$ 15.00 : When applied for.
 Special .. £ 238.00 : June 30 1916
 Donkey Boiler Fee .. £ - : - :
 Travelling Expenses (if any) £ - : - :
 Sunday fee, .. 10.00 :
 Committee's Minute

J. Blakett & R. P. Hatcheter
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

TUE. 14 NOV. 1916

Assigned

+ L.P. No. 6. 16.

Line for oil fuel 6.16. F.P. above 150°F



Lloyd's Register Foundation

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