

REPORT ON MACHINERY.

MON. 19 NOV 1900

Port of Philadelphia.

Received at London Office NOV 19 1900

No. in Survey held at Philadelphia Date, first Survey March 10. 1899 Last Survey Oct 11. 1900
 7. Book. 47 on the Machinery + Boilers of the Steel Twin Screw Steamship Sierra (Number of Visits 135)
 ster. H.C. Kordlette Built at Philadelphia By whom built The W. Crump & Sons S. & S. Bldg. Tons { Gross 5989
 { Net 3756
 ines made at Philadelphia By whom made The W. Crump & Sons S. & S. Bldg. when made 1900
 lers made at Philadelphia By whom made The W. Crump & Sons S. & S. Bldg. when made 1900
 istered Horse Power 1036 Owners Oceanic Steam Ship Co. Port belonging to San Francisco
 Horse Power as per Section 28 1036 Ref. Mech. Littered

INES, &c.— Description of Engines Triple Expansion No. of Cylinders Six
 meter of Cylinders 28" 46" 75" Length of Stroke 48" Revolutions per minute 100 Diameter of Screw shaft 14.2
 meter of Tunnel shaft 13 1/2" Diameter of Crank shaft journals 14 1/2" Diameter of Crank pin 15" Size of Crank webs 9" 10 1/2" 12" thick
 meter of screw 14 1/2" Pitch of screw 21 1/2" No. of blades 3 State whether moveable No Total surface 69 sq ft
 of Feed pumps Two Comp Diameter of ditto 12" x 12" Stroke 18" Can one be overhauled while the other is at work They are independent pumps
 of Bilge pumps One Comp Diameter of ditto 6 1/2" x 12" Stroke 12" Can one be overhauled while the other is at work it is independent pump
 of Donkey Engines 1 Ballast Pump Sizes of Pumps 2 1/2" x 8 1/2" x 10 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room as per approved Pumping arrangement In Holds, &c., in all Holds & Reels, as per approved Pumping arrangement
 of bilge injections two sizes 10 inch Connected to condenser, or to circulating pump — Is a separate donkey suction fitted in Engine room & size 3 1/2"
 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
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves
 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
 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
 at pipes are carried through the bunkers Bilge & Tank Suctions How are they protected strong iron casings
 all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes
 were stern tube, propeller, screw shaft, and all connections examined in dry dock Sept. 11. 1900 Is the screw shaft tunnel watertight Yes
 fitted with a watertight door Yes worked from Engine Room Platform
 LERS, &c.— (Letter for record (S)) Total Heating Surface of Boilers 15000 sq ft Horizontal feed water
 and Description of Boilers Eight, Gluehrid, multitubular Working Pressure 175 lb Tested by hydraulic pressure to 350 lb
 of test June 1 (1900) each boiler be worked separately Yes Area of fire grate in each boiler 510 sq ft No. and Description of safety valves to
 boiler two Marine type Area of each valve 9.62 sq in Pressure to which they are adjusted 175 lb Are they fitted
 easing gear Yes Smallest distance between boilers or uptakes and bunkers on woodwork 10" Mean diameter of boilers 13' 7 5/32"
 with 10' 4 1/2" Material of shell plates Steel Thickness 1 1/32" Description of riveting: circum. seams none long. seams double riv. double butt
 meter of rivet holes in long. seams 1 3/16" Pitch of rivets 7 1/2" Lap of plates on width of butt straps 16 1/2"
 centages of strength of longitudinal joint 94.94% Working pressure of shell by rules 178.62 Size of manhole in shell 16" x 12"
 of compensating ring 40 7/8 x 33 3/8 x 1 1/2" No. and Description of Furnaces in each boiler two Corrugated Material Steel Outside diameter 43 1/32"
 with plain part top 6' 10" Thickness of plates bottom 3 3/4" Description of longitudinal joint welded No. of strengthening rings Corrugated
 king pressure of furnace by the rules 183 lb Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"
 of stays to ditto: Sides 7 1/4 x 7 5/8" Back 7 x 7 1/4" Top 7 1/4 x 7 5/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 214 lb
 erial of stays Steel Diameter at smallest part 1.263 Area supported by each stay 50.75 sq in Working pressure by rules 206.19 lb End plates in steam space:
 erial Steel Thickness 1" Pitch of stays 14 x 14 1/2" How are stays secured double nuts Working pressure by rules 219 lb Material of stays Steel
 meter at smallest part 2 1/2" Area supported by each stay 203.2 sq in Working pressure by rules 240 lb Material of Front plates at bottom Steel
 kness 5/8" Material of Lower back plate Steel Thickness 9/16" Greatest pitch of stays 7 x 7 1/4" Working pressure of plate by rules 214 lb
 meter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 3/4" Material of tube plates Steel Thickness: Front 5/8" Back 5/8" Mean pitch of stays outer rows stay tubes
 across wide water spaces 13" Working pressures by rules as per approved Plan Girders to Chamber tops: Material Steel Depth and
 ness of girder at centre 9' x 1 1/4" Length as per rule 2' 8 3/8" Distance apart 7 1/4" Number and pitch of Stays in each 3, 7' 7 3/8"
 king pressure by rules 188 lb Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 uthy — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet
 Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —
 tiffened with rings — Distance between rings — Working pressure by rules — End plates: Thickness — How stayed —
 king pressure of end plates — Area of safety valves to superheater — Are they fitted with easing gear —

DONKEY BOILER Description *Cylindrical Multitubular*
Made at *Philadelphia* By whom made *W. H. Cramp & Sons S. E. Dk* When made *1900* Where fixed *off Barb*
Working pressure *175* Tested by hydraulic pressure to *350* No. of Certificate *—* Fire grate area *30* Description of safety valves *Marine type*
No. of safety valves *One* Area of each *9.62* Pressure to which they are adjusted *175* If fitted with easing gear *Yes* If steam from main boiler
enter the donkey boiler *Yes* Diameter of donkey boiler *9 ft. 11 1/8"* Length *10 ft.* Material of shell plates *Steel* Thickness *7/8"*
Description of riveting long seams *Double strap* Diameter of rivet holes *1 1/16"* Whether punched or drilled *Drilled* Pitch of rivets *—*
Lap of plating *15 3/4"* Per centage of strength of joint *—* Rivets *94.57* Thickness of shell crown plates *15/16"* Radius of do. *—* Pitch of stays to do. *13"*
Dia. of stays *2 1/4"* Diameter of furnace *3 ft. 4"* Length of furnace *6' 10"* Thickness of furnace plates *1/2"* Description
joint *Welded* Thickness of furnace crown plates *—* Stayed by *Corrugations* Working pressure of shell by rules *175*
Working pressure of furnace by rules *188.4* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of scotter tubes *3"*

SPARE GEAR. State the articles supplied:—
1 Set of valves for each Pump, 3 Valve Spindles, 3 Set Piston Packing Comp.
2 Crankshaft boxes with bolts, 2 Crankpin boxes with bolts, One Crankshaft Pin
1 Piston rod, 1/2 Set packing bolts, 1 Crankshaft Slipper Guide, 50 Boiler tubes, 15 Stay tubes, 200 Condenser tubes, 1 Set Coupling bolts, 2 Set
Springs, M.B., 1 Spring D.B., 1 H.C. Strap, 2 Thrust shoes, 4 Thrust rollers, M.B., 1 G.D.B., 6 tubes D.B. from a brass for repairs.
1 Set of gauges for Crankshafts, 14 Gals. Evaporator, 4 Gals. fresh W. Cond. For Blowdown, 2 Piston rods, 2 Crankshafts, 2 Condensers, 2 Corns, 2
The following spare parts are kept for the 3 Sister Vessels, half at each end Port. 2 tail shafts, 2 Crankshafts, two
Hand Propellers, two left Hand Propellers.

The foregoing is a correct description,

W. H. Cramp & Sons Ship & Engine Builders Manufacturer.

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

The Machinery & Boilers of this Vessel are of modern design, and the
Material & Workmanship is satisfactory. All Pumps are independent of Main Engine
Steam Heating Joints, Evaporators, Feed Heaters, automatic Filling Apparatus, Complete Water Service
The Shipping is of Steel, as per Plans, and the Material has been tested, as per annexed Test
The Boilers have been completed according to approved Plans, and the Material has
been tested as per annexed Test Sheets. The Workmanship is satisfactory, and the
have been tested by hydraulic Pressure, to twice the Working Pressure, with satisfactory Results.
Boilers and Engines are well fitted, to strong Foundations, and on a trial trip
the entire Installation worked in an efficient manner.

Letters relating to this case are dated, April 5. Sept. 15. 1899. Feb. 17 & 24. 1900

I would recommend, that the Record + L.M.C. 10.1900 be made in this Case.

It is submitted that
this vessel is eligible for
THE RECORD.

✱ L.M.C 10.00. F.D. Elec Light-Ref

Certificate (if required) to be sent to

The amount of Entry Fee..	£ 3 : - :	When applied for,
Special ..	£ 71 : 16 :	Sept. 28. 1900.
Donkey Boiler Fee ..	£ 2 : 2 : :	When received,
Travelling Expenses (if any) £	:	Oct. 29. 1900.

Committee's Minute

Assigned

PHL1132/37

NOV 23 1900

✱ L.M.C 10.00



© 2021

Lloyd's Register
Foundation