

REPORT ON MACHINERY.

14 MAY 1917

Received at London Office

of writing Report _____ When headed in at Local Office _____ 10 Port of Pittsburgh Pa

in Survey held at Pittsburgh Pa Date, First Survey July 17 1916 Last Survey _____ 1917

g. Book. _____ on the Steel S.S. "Mami" (Union I. Works No 127) Tons } Gross _____ Net _____

ion of Sster _____ Built at San Francisco By whom built Union Iron Works When built 1914

gines made at East Pittsburgh By whom made Westinghouse Machine Co when made 1914

illers made at 2500 By whom made _____ when made _____

gistered Horse Power 2084 Owners Matson Navigation Co Port belonging to _____

raft Horse Power at Full Power 2500 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

RBINE ENGINES, &c.—Description of Engines Two screw Single Reduction Geared Turbines No. of Turbines 2 H.P. 2 L.P.

meter of Rotor Shaft Journals, H.P. 4" L.P. 4" Diameter of Pinion Shaft 4 1/2" Keuley 6.99" dia x 4 1/8 hole Hollow Pinion

meter of Journals 6.99" Distance between Centres of Bearings 24 1/4" Diameter of Pitch Circle 4.494"

meter of Wheel Shaft 15.235" Distance between Centres of Bearings 4'-9" Diameter of Pitch Circle of Wheel 9'-11.8"

th of Face Total 30" Diameter of Thrust Shaft under Collars 2 3/4" Kingsbury Thrust Diameter of Tunnel Shaft as per rule _____ as fitted _____

of Screw Shafts Two Diameter of same as per rule _____ as fitted _____ Diameter of Propeller _____ Pitch of Propeller _____

of Blades _____ State whether Moveable _____ Total Surface _____ Diameter of Rotor Drum, H.P. 28" L.P. 33" Impulse wheels, H.P. 4-3 3/8" L.P. 4-1 1/2"

ickness at Bottom of Groove, H.P. 1 3/32" L.P. 1 1/2" Astern Revs. per Minute at Full Power, Turbine 2150 Propeller 135 LP 4-1 1/2"

PARTICULARS OF BLADING.

Type	H.P. EXPANSION IMPULSE			L.P. REACTION			ASTERN. IMPULSE		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION	1 3/4" mean	4 1/8" MEAN	2	4"	41"	4	HP 1 3/4" MEAN	4 1/8" MEAN	2
D	2 1/2"	28"	4	5"	43"	3	LP 4 3/16"	4-9 1/8"	2
D	2 3/4"	29"	4	6"	45"	4			
E	3"	30"	4	7 1/2"	48"	4			
E	4"	32"	4	9"	51"	3			
E	4"	36"	10	9"	51"	2			

o. and size of Feed pumps _____

o. and size of Bilge pumps _____

o. and size of Bilge suction in Engine Room _____

In Holds, &c. _____

o. of Bilge Injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate Donkey Suction fitted in Engine Room & size _____

re all the bilge suction pipes fitted with roses _____ Are the roses in Engine room always accessible _____

re all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____

re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the Discharge Pipes above or below the deep water line _____

re they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate _____

That pipes are carried through the bunkers _____ How are they protected _____

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____

re the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges _____

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

ILERS, &c.—(Letter for record _____) Manufacturers of Steel _____

Total Heating Surface of Boilers _____ Is Forced Draft fitted _____ No. and Description of Boilers _____

orking Pressure _____ Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____

an each boiler be worked separately _____ Area of fire grate in each boiler _____ No. and Description of Safety Valves to _____

ach boiler _____ Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers _____ Length _____ Material of shell plates _____

Thickness _____ Range of tensile strength _____ Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____

ong. seams _____ Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____

Per centages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____

Size of compensating ring _____ No. and Description of Furnaces in each Boiler _____ Material _____ Outside diameter _____

Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____

Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____

Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____

Material of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space _____

Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____

Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____

Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____

Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____

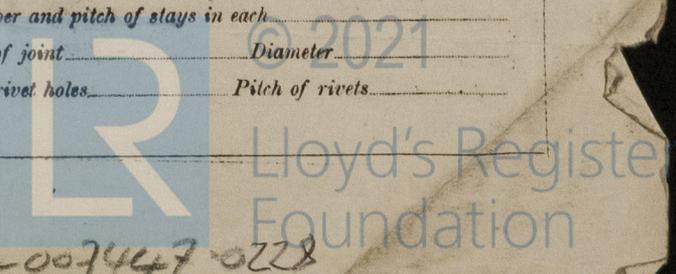
Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and _____

thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____

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

Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diameter of rivet holes _____ Pitch of rivets _____

Working pressure of shell by rules _____ Crown plates: Thickness _____ How stayed _____



007439-007447-0228

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 _____

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

SPARE GEAR. State the articles supplied:— _____

The foregoing is a correct description,
 The Westinghouse Machine Co. Manufacturer.
 J. A. Davies, Engineer, Marine Dept.

Dates of Survey while building { During progress of work in shops --- July 1, 4, 11, 19, 24 Aug 1, 11, 15, 21, 22, 23, 30 Sept 8, 11, 14, 21, 24, Oct 3, 10, 16, 24, 27, Nov 1, 4, 14, 15, 21, 23, 24, Dec 1, 4, 11, 20, 21, 24, 29, 30.
 { During erection on board vessel --- Nov 2, 6, 9, 13, 16, 15, (H.H.)
 Total No. of visits _____ Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Casings 2-10-16, 1-11-16. Rotors 21-9-16 8-11-16 " donkey " 2-11-16 20-12-16 Gearing 21-11-16 20-12-16
 Rotor shaft 10-10-16 23-11-16 Thrust shafts 16-10-16 Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts
 Completion of pumping arrangements Boilers fired Engines tried under steam

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____
 Material and tensile strength of Rotor shaft Best Steel 42060 lbs 11" Identification Mark on Do. 17 W.B.
 Material tensile strength of Pinion shaft Hard Alloy Steel 40800 lbs 11 1/2" Identification Mark on Do. 16 W.B.

Material of Wheel shafts Best Steel Identification Mark on Do. 16" ATT Material of Thrust shaft Thrust on fore end of wheel shaft Identification Mark on Do. ✓
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes _____ Test pressure _____
 Is an installation fitted for burning oil fuel _____ Is the flash point of the oil to be used over 150°F. _____
 Have the requirements of Section 49 of the Rules been complied with _____

Is this machinery a duplicate of a previous case NO If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This machinery has been built under special survey, the materials and workmanship are of good quality and the hydraulic tests on the cylinders and the shop steaming trials proved satisfactory. It has been shipped to San Francisco to be fitted in the vessel San Francisco Surveyors notified.

(Vertical text on left margin: Certificate (if required) to be sent to...)
 The amount of Entry Fee ... £ : :
 Special ... \$ 165.50
 Donkey Boiler Fee ... \$ 162.00
 Travelling Expenses (if any) \$ 12.00
 Pop fees + exp charge

When applied for, charged at 1/10ths per cent per month from 26/4/17
 William Butler, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York APR 26 1917
 Assigned See other report

