

REPORT ON MACHINERY.

No. 12206.

Port of Hamburg

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No. in Survey held at

Reg. Book.

on the Steel S.S. "Adelaide"Date, first Survey 5th Oct. 1910 Last Survey 25th July 1911(Number of Visits 35)Master Wellhöfer Built at Flensburg By whom built Flensburger Schiffbau Ges. Tons { Gross 5898 Net 3712 When built 1911Engines made at Flensburg By whom made Flensburger Schiffbau Ges. when made 1911Boilers made at Flensburg By whom made Flensburger Schiffbau Ges. when made 1911Registered Horse Power 720 Owners Deutsch-Austral. Dampfschiff Ges. Port belonging to HamburgNom. Horse Power as per Section 28 720 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 30 5/16", 51 9/16", 84" Length of Stroke 5' 4" Revs. per minute 78 Dia. of Screw shaft as per rule 16.5" 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 — 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' 4 3/4"
 Dia. of Tunnel shaft as per rule 15 5/16" Dia. of Crank shaft journals as per rule 15 5/16" Dia. of Crank pin 16 7/32" Size of Crank webs 10 7/8" x 24" Dia. of thrust shaft under
 collars 16 7/32" Dia. of screw 19 1/6" Pitch of Screw 16 1/2" No. of Blades 4 State whether moveable no Total surface 9029 sq. ft.
 No. of Feed pumps 2 Diameter of ditto 4 1/8" Stroke 31 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 5/16" Stroke 31 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 6 Sizes of Pumps As per Specification No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 5 off - 4", 1 from Well 4", 1 from Recess 3", 1 from Tunnel, 2 from Tunnel, 2 from Tanks 16 off 4", 1 from
Fore and Aft peak 2 off - 3 1/2"
 No. of Bilge Injections 1 sizes 12" Connected to condenser, or to circulating pump yes 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 none
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves & Cocks
 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 none 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 1/5. 11. of Stern Tube 20/5. 11 Screw shaft and Propeller 14/6. 11.
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from cyd. platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix A.M. Ges. Abt. Hoerder Verein of Harde
 Total Heating Surface of Boilers 84,114 sq. ft. Is Forced Draft fitted yes No. and Description of Boilers 3 single end, multitubular
 Working Pressure 185 lbs Tested by hydraulic pressure to 370 lbs Date of test 24. 4. - 1. 5. 11 No. of Certificate 141. - 2. - 3.
 Can each boiler be worked separately yes Area of fire grate in each boiler 65.9 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Spring load. Area of each valve 18.56 sq. in. Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15 3/8" Length 12 1/4" Material of shell plates Steel
 Thickness 1 1/4" Range of tensile strength 28,840 to 32,000 lbs. Are the shell plates welded or flanged — Descrip. of riveting: cir. seams lap. dbl. riv.
 long. seams lap. riv. Diameter of rivet holes in long. seams 1.5" Pitch of rivets 20.5" Lap of plates or width of butt straps 27.6" x 1 1/2"
 Per centages of strength of longitudinal joint 115.1% Working pressure of shell by rules 200.1 lbs. Size of manhole in shell 16.5" x 12 1/8"
 Size of compensating ring 8.6" x 1.8" No. and Description of Furnaces in each boiler 3 horizontal Material Steel Outside diameter 4' 1.25"
 Length of plain part 4" Thickness of plates 6.5" Description of longitudinal joint welded No. of strengthening rings none
 Working pressure of furnace by the rules 218.5 lbs Combustion chamber plates: Material Steel Thickness: Sides .625" Back .625" Top .625" Bottom 1"
 Pitch of stays to ditto: Sides 7.7" x 7.5" Back 8.12" x 7.7" Top 7.7" x 7.5" If stays are fitted with nuts or riveted heads nuts & heads Working pressure by rules 228.9 lbs
 Material of stays Steel Diameter at smallest part 1.37" Area supported by each stay 58 sq. in. Working pressure by rules 228.9 lbs End plates in steam space:
 Material Steel Thickness 1" Pitch of stays 15" x 15" How are stays secured all nut & wash. Working pressure by rules 227.5 lbs Material of stays Steel
 Diameter at smallest part 3" Area supported by each stay 225 sq. in. Working pressure by rules 326.9 lbs Material of Front plates at bottom Steel
 Thickness 1" Material of Lower back plate Steel Thickness .9" Greatest pitch of stays 12.5" Working pressure of plate by rules 185 lbs
 Diameter of tubes 2.75" Pitch of tubes 33.7" Material of tube plates Steel Thickness: Front 1" Back .9" Mean pitch of stays 7.75"
 Pitch across wide water spaces 13.75" Working pressures by rules 185.3 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9.82" x 1.35" Length as per rule 34" Distance apart 7.5" Number and pitch of stays in each 3 - 7.7"
 Working pressure by rules 311.4 lbs 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 —

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No.	Description	Manufacturers of Steel
	VERTICAL DONKEY BOILER—	No Donkey Boiler fitted

Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____

Working pressure tested by hydraulic pressure to _____ When made _____ Where fixed _____

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 Impeller, 1 Propellershaft, 1/3 crankshaft, 1 pair crankpin braces, and nuts for connecting rod bottom end, 4 bolts and nuts for connecting rod top end, 2 pump links one for each side, 1 slide rod, 1 air pump rod, 1 circulating pump rod, 1 set coupling bolts, 30 tubes for main boilers, 25 combustion tubes and 80 scumblands, 1 set valves for air pumps, 1 set valves for circulating pump, 1 set valves and seats for feed and bilge pump, each, 1 set valves for each auxiliary steam pump, 1 set packing rings for each piston and piston valve, 1 spring for main boiler safety valve, 1 spring for feed pump safety valve, 1/2 set fire bars for each boiler, a large number of bolts, studs, nuts, rivets, bar and plate iron assorted.

The foregoing is a correct description,

J. H. H. H.
 Manufacturer.

Dates of Survey while building		During progress of work in shops - -	During erection on board vessel - -	Total No. of visits
		5/10, 25/10, 31/10, 14, 19/11, 24/11, 6/12, 11/12, 19/12, 29/12, 10, 17/1, 13/1, 29/1, 7/2, 24/2, 22/2, 3/3, 9/3, 14/3, 22/3, 3/4	18/4, 24/4, 16/5, 11, 18/5, 20/5, 12/6, 15/6, 24/6, 28/6, 27/6, 1/7, 8/7, 12/7, 15/7, 11	357

Is the approved plan of main boiler forwarded herewith *yes* ✓
 " " " *Lucy Long*
 " " " *donkey* " " "

[illegible]

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

Specification of Soukey Pumps:

[illegible]

Material and workmanship of these Engines and Boilers are of very good description, the outfit is ample. The copies of invoices and bills of the Steel Boiler Material, signed by the leading purveyors are in my hands. The following Certificates of shaping and other large forgings will be found attached. - I attended the trip from Timbuctoo to Kamsburg when the Machinery was full satisfaction. I beg to recommend that the Machinery of this vessel be closed. **\$ LMC 7. 11.** and that a Certificate to this effect be issued.

The amount of Entry Fee. **\$ 60. -** When applied for, **\$ 14.**

Special

The amount of Entry Fee..	Rs 62.-	When applied for,
Special	Rs 1091.-	14/4 .. 1944
Donkey Boiler Fee	Rs :	When received,
Travelling Expenses (if any)	Rs 289.-	15/4 .. 1944

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

Committee's Minute

FRI. AUG. 4-1911

Assigned

+ L.M.B. 7.11
F.D.

WRITTEN.

Lloyd's Register
Foundation