

Date of writing Report 22nd Dec 1912 When handed in at Local Office 19

Port of Bremen

No. in Survey held at *Geestmünde*
Reg. Book. *Sup 51* on the *Stein & Co* **LÜNEBURG**Date, First Survey 22nd August Last Survey 19th December 1912
(Number of Visits 18)Master *Schmitt* Built at *Geestmünde* By whom built *Joh. G. Tecklenborg & Co* Tons { Gross 5819
Net 3683Engines made at *Geestmünde* By whom made *Joh. G. Tecklenborg & Co* when made 1912Boilers made at *Geestmünde* By whom made *Joh. G. Tecklenborg & Co* when made 1912Registered Horse Power 734 Owners *Auton Australia Dampier & Co* Port belonging to *Hamburg*Nom. Horse Power as per Section 28 734 Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*

ENGINES, &c.—Description of Engines *Triple Compound Surface Condensing* No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders $22\frac{1}{2}$, $46\frac{1}{2}$, $78\frac{3}{4}$ Length of Stroke $53\frac{1}{2}$ Revs. per minute 75 Dia. of Screw shaft as per rule 16.57 as fitted 16.62 Material of *S.M. steel* 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 *yes* If two
liners are fitted, is the shaft lapped or protected between the liners *yes* Length of stern bush $79\frac{1}{8}$
Dia. of Tunnel shaft as per rule 14.96 as fitted 14.96 Dia. of Crank shaft journals as per rule 15.76 as fitted 15.76 Dia. of Crank pin $16\frac{1}{8}$ Size of Crank webs $10\frac{1}{4}$ Dia. of thrust shaft under
collars $15\frac{3}{4}$ Dia. of screw $19\frac{1}{2}$ Pitch of Screw $19\frac{1}{2}$ No. of Blades 4 State whether moveable *no* Total surface 122.66 sq ft
No. of Feed pumps 2 Diameter of ditto $3\frac{3}{4}$ Stroke $27\frac{1}{2}$ Can one be overhauled while the other is at work *yes*
No. of Bilge pumps 2 Diameter of ditto $4\frac{1}{2}$ Stroke $27\frac{1}{2}$ Can one be overhauled while the other is at work *yes*
No. of Donkey Engines 4 Sizes of Pumps *given on other side* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *4* *Stoke hold 5 - 4" dia* In Holds, &c. *2 in each hold 4" dia, 1 in tunnel 4" dia*
No. of Bilge Injections 1 sizes $1\frac{1}{2}$ Connected to condenser or to circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *yes 4" dia*
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 *yes*
Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both*
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 *bilge suction pipes* How are they protected *wooden casings*
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 *11th Nov 1912* of Stern Tube *11th Nov 1912* Screw shaft and Propeller *11th Nov 1912*
Is the Screw Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *Engine platform above deck*

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel *Fried. Krupp & Co. G. & A. Witten, Rheinische Stahlwerke, Altkatholische Schmelzwerke*
Total Heating Surface of Boilers 11192 Is Forced Draft fitted *yes* No. and Description of Boilers *4 cylindrical multitubular*
Working Pressure 206 lbs Tested by hydraulic pressure to 412 lbs Date of test $6/9$ & $15/10/12$ No. of Certificate $32, 33, 34, 35$
Can each boiler be worked separately *yes* Area of fire grate in each boiler 64.5 sq ft No. and Description of Safety Valves to
each boiler *2 spring loaded* Area of each valve 12.18 sq in Pressure to which they are adjusted 206 lbs Are they fitted with easing gear *yes*
Smallest distance between boilers or uptakes and bunkers or woodwork 12 in Mean dia. of boilers $15.2\frac{1}{4}$ Length $11-12\frac{1}{2}$ Material of shell plates *S.M. steel*
Thickness $1\frac{1}{2}$ Range of tensile strength $27.9-32.4$ Are the shell plates welded or flanged *flanged* Descrip. of riveting: cir. seams *double*
long. seams *quadruple* Diameter of rivet holes in long. seams $1\frac{1}{4}$ Pitch of rivets $19\frac{1}{16}$ Lap of plates or width of butt straps 30 in
Per centages of strength of longitudinal joint rivets 93.5 Working pressure of shell by rules 213 lbs Size of manhole in shell $11\frac{1}{2} \times 15\frac{1}{16}$
Size of compensating ring $32\frac{3}{4} \times 1\frac{1}{4}$ No. and Description of Furnaces in each boiler *3 Marlow* Material *S.M. steel* Outside diameter $49\frac{3}{16}$
Length of plain part top $4\frac{1}{4}$ Thickness of plates crown $11/16$ Description of longitudinal joint *welded* No. of strengthening rings
bottom $4\frac{3}{4}$ bottom $11/16$ Working pressure of furnace by the rules 241 lbs Combustion chamber plates: Material *S.M. steel* Thickness: Sides $11/16$ Back $21/32$ Top $11/16$ Bottom $61/64$
Pitch of stays to ditto: Sides $8\frac{1}{8} \times 6\frac{1}{16}$ Back $7\frac{1}{4} \times 6\frac{1}{16}$ Top $7\frac{1}{8} \times 7\frac{1}{16}$ If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules 287 lbs
Material of stays *S.M. steel* Diameter at smallest part $19/16$ Area supported by each stay 48.8 sq in Working pressure by rules 238 lbs End plates in steam space:
Material *S.M. steel* Thickness $11/16$ Pitch of stays $4 \times 15\frac{1}{32}$ How are stays secured *double nut* Working pressure by rules 275 lbs Material of stays *S.M. steel*
Diameter at smallest part $2\frac{1}{32}$ Area supported by each stay 215 sq in Working pressure by rules 285 lbs Material of Front plates at bottom *S.M. steel*
Thickness $1\frac{1}{32}$ Material of Lower back plate *S.M. steel* Thickness $63/64$ Greatest pitch of stays $7\frac{1}{4}$ Working pressure of plate by rules 242 lbs
Diameter of tubes $2\frac{3}{4}$ Pitch of tubes $3\frac{1}{16} \times 32\frac{9}{32}$ Material of tube plates *S.M. steel* Thickness: Front $1\frac{1}{32}$ Back $61/64$ Mean pitch of stays $9\frac{1}{16}$
Pitch across wide water spaces $13\frac{3}{4}$ Working pressures by rules 216 lbs Girders to Chamber tops: Material *S.M. steel* Depth and
thickness of girder at centre $10\frac{1}{4} \times 11/16$ Length as per rule $35\frac{1}{4}$ Distance apart $7\frac{1}{16}$ Number and pitch of stays in each *3 - 7\frac{1}{8}*
Working pressure by rules 224 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

Manufacturers of Steel

SPARE GEAR. State the articles supplied:—1 crank shaft, 1 propeller shaft, 1 propeller, 1 cross head brass, 1 crank pin brass, 2 crank pin and crosshead brasses bolts & nuts, 1 set of coupling bolts, 2 slide valve spindles, 1 piston rod for air pump, 1 set of valves for air pump 1 disto for feed and bilge pumps, 2 complete set of links, 2% of condenser tubes & flanges, 2% of boiler tubes, 3 safety valve springs, 6 sets of gauge glasses, 10% of bolts for cylinders & slide valve cover, 10% piston bolts, 1 complete eccentric strap, 2 main bearing bolts & nuts, washers & iron of various sizes.

The foregoing is a correct description,

Manufacturer.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 22/8, 30/9. Slides 22/8, 9/10 Covers 22/8, 9/10 Pistons 30/9, Rods 30/9, 9/10
Connecting rods 30/9. Crank shaft 30/9 Thrust shaft 30/9 Tunnel shafts 30/9 Screw shaft 30/9, 11/11 Propeller 22/8, 9/10
Stern tube 22/8, 11/11. Steam pipes tested 9/12 Engine and boiler seatings 30/9, 11/11. Engines holding down bolts 30/9, 9/10
Completion of pumping arrangements. 14/12 Boilers fixed 29th Nov. Engines tried under steam 19/12
Main boiler safety valves adjusted 19/12. Thickness of adjusting washers. Port Boiler, Centre Boiler, Star Boiler, Foreman Boiler
Port .53 .57 .49 .51
Star .59 .34 .44 .41
Material of Crank shaft 1st steel Identification Mark on Do. No 7543 Material of Thrust shaft 1st steel Identification Mark on Do. No 7244
K.H. 5.12 K.H. 2.12 K.H. 3.12 K.H. 2.12
Material of Tunnel shafts 1st steel Identification Marks on Do. No 7242 / No 7346-6-7 / No 7361-3 Material of Screw shafts 1st steel Identification Marks on Do. No 7363 / No 7354
K.H. 2.12 K.H. 3.12 K.H. 2.12 K.H. 3.12 K.H. 3.12 K.H. 3.12
Material of Steam Pipes Steel Test pressure 615 lbs. ✓

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

Size of Pumps:- $\frac{77/8 \times 10^{1/4}}{97/8}$, $\frac{91/16 \times 65/16}{1113/16}$, $\frac{45/16 \times 5^{1/2}}{415/16}$, $\frac{71/16 \times 43/4}{55/8}$.

These Engines and Boilers have been manufactured in accordance with the approved plans, the Secretary's letters and otherwise in conformity with the Rules.

The material and workmanship are good.

They are eligible in my opinion to be classed in the Society's Registered Book with the notation of $\text{LMG } 12.12$.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 12. 12

F. D.

The amount of Entry Fee ..	£	62.-	When applied for,
Special	£	1163.-	24.12.1912
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any) £		30.-	3/31.1913

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

Committee's Minute

FRI. JAN. - 3. 1913

Assigned

+ Lm 6 12 12

MACHINERY CERTIFICATE
WRITTEN.

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Foundation