

Rpt. 4.

REPORT ON MACHINERY.

No. 236

Received at London Office TUE 22. 1913

Date of writing Report 2nd April 1913 When handed in at Local Office 19 Port of Bremen.

No. in Survey held at Bremen
Reg. Book.

Date, First Survey 16th Sept 1912 Last Survey 26th March 1913

Sup 73 on the steel ssr LAUTERFELS

(Number of Visits)

Gross 5811

Tons Net 3643

When built 1913

Master Volkmann Built at Bremen

By whom built Aktion Gesellschaft Weser

Engines made at Bremen

By whom made Aktion Gesellschaft Weser

when made 1913

Boilers made at Bremen

By whom made Aktion Gesellschaft Weser

when made 1913

Registered Horse Power 520

Owners Deutsche Impp. Ges. Harra

Port belonging to Bremen

Nom. Horse Power as per Section 28 520

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion surface condensing No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 28 3/4 46 7/8 75 9/16 Length of Stroke 53 5/16 Revs. per minute 65 Dia. of Screw shaft as per rule 16 5/32 Material of shaft steel
as fitted 16 7/32 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 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 76
Dia. of Tunnel shaft as per rule 14 3/4 Dia. of Crank shaft journals as per rule 15 7/32 Dia. of Crank pin 15 1/16 Size of Crank webs 10 1/4 Dia. of thrust shaft under
collars 15 9/16 Dia. of screw 19 3/16 Pitch of Screw 19- 8 1/16 No. of Blades 4 State whether moveable yes Total surface 102.3 sq. ft.
No. of Feed pumps 2 Diameter of ditto 3 5/16 Stroke 22 9/16 Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 4 5/16 Stroke 22 9/16 Can one be overhauled while the other is at work yes
No. of Donkey Engines 3 Sizes of Pumps 11 3/16 x 8 1/16 13 3/4 x 5 3/4 7 1/8 x 4 3/4 5 5/8 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4- 3 9/16 dia In Holds, &c. 2 in each hold - 3 1/16 dia 1 in tunnel 3 9/16 dia

No. of Bilge Injections 1 sizes 7 7/8 Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 9/16
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 both
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 13th Feb. 13 of Stern Tube 13th Feb. 13 Screw shaft and Propeller 25th Feb. 13
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck

BOILERS, &c.—(Letter for record 5.) Manufacturers of Steel Fried. Krupp, Essen. Gierke & Co. Bremen
Total Heating Surface of Boilers 6950 Is Forced Draft fitted yes No. and Description of Boilers 3 cylindrical multitubular
Working Pressure 192 lbs Tested by hydraulic pressure to 263 lbs Date of test 7. 10. 2. 13 No. of Certificate 48, 49, 50
Can each boiler be worked separately yes Area of fire grate in each boiler 49.5 sq. ft. No. and Description of Safety Valves to
each boiler 2 spring loaded Area of each valve 12.2 sq. ft. Pressure to which they are adjusted 192 lb Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 20 Mean dia. of boilers 17 1/4 Length 153 Material of shell plates 1/2 in. steel
Thickness 1.3 Range of tensile strength 28-33 tons Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams double butt
long. seams quadruple Diameter of rivet holes in long. seams 1.34 Pitch of rivets 10 Lap of plates or width of butt straps 23.2
Per centages of strength of longitudinal joint rivets 11.5 plate 82 Working pressure of shell by rules 202 lb Size of manhole in shell 11.8 x 15.8
Size of compensating ring 41.2 x 36.5 No. and Description of Furnaces in each boiler 3 Morin Material 1/2 in. steel Outside diameter 43.2
Length of plain part top Thickness of plates crown 1.67 Description of longitudinal joint welded No. of strengthening rings
bottom Working pressure of furnace by the rules 198 lb Combustion chamber plates: Material 1/2 in. steel Thickness: Sides 62 Back 62 Top 62 Bottom 82
Pitch of stays to ditto: Sides 8.3 x 2.1 Back 7.7 x 7.6 Top 8.3 x 7.9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 234 lb
Material of stays steel Diameter at smallest part 1.516 Area supported by each stay 65.5 sq. ft. Working pressure by rules 212 lb End plates in steam space:
Material 1/2 in. steel Thickness 1.08 Pitch of stays 15.2 x 14.6 How are stays secured double nuts Working pressure by rules 240 lb Material of stays 1/2 in. steel
Diameter at smallest part 2.25 Area supported by each stay 229 sq. ft. Working pressure by rules 220 lb Material of Front plates at bottom 1/2 in. steel
Thickness 1.06 Material of Lower back plate 1/2 in. steel Thickness .94 Greatest pitch of stays 15.2 x 2.5 Working pressure of plate by rules 216 lb
Diameter of tubes 3 Pitch of tubes 4.1 Material of tube plates 1/2 in. steel Thickness: Front 1.06 Back .90 Mean pitch of stays 10.3
Pitch across wide water spaces 14 Working pressures by rules 206 lb Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 9.25 x 1.58 Length as per rule 34.6 Distance apart 7.9 Number and pitch of stays in each 3-8.3
Working pressure by rules 194 lb Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
separately yes 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 15 sq. in. Are they fitted with easing gear yes

© 2020

Lloyd's Register
W856-0150
Foundation

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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 1/3 crank shaft, 1 propeller shaft, 1 propeller blade, 2 overhead brasses, 2 crank pin brasses, 2 crank pin crosshead brasses both ends, 2 main bearing bolts, 2 sets of coupling bolts, 1 slide valve rod, 1 set of piston rings, 1 eccentric strap complete, 1 piston rod for air pump, 1 piston & piston rod for circulating pump, 1 complete set of links, 1 set of valve for air, feed & bilge pump, 1 set of safety valve springs, 2% of condenser tubes, 10% of bolts for cylinders, slide valve cover and piston, a quantity of assorted bolts & nuts, iron of various sizes.

The foregoing is a correct description,
ACTION-GESELLSCHAFT WESER
Edmann & Co. Bremen Manufacturer.

Dates of Survey while building	During progress of work in shops --	1912. Sep 16, Oct 2, 4, 19, 29, Nov 21, Dec 21, 30. 1913. Jan. 14, 21 Feb. 1, 7, 10, 11, 13
	During erection on board vessel --	1913. Feb. 20, 25 March 13, 15, 26
	Total No. of visits	20

Is the approved plan of main boiler forwarded herewith		Yes
" " " donkey " " "		Yes
Dates of Examination of principal parts—Cylinders 2/10, 2/11, 2/11 Slides 2/10, 2/11 Covers 2/10, 2/11 Pistons 2/10, 2/11 Rods 2/10		
Connecting rods 2/11	Crank shaft 2/11	Thrust shaft 2/11
Tunnel shafts 2/11	Screw shaft 1/19, 1/3, 2/2, 2/2	Propeller 2/11, 1/3, 2/2, 2/2
Stern tube 2/11, 1/3, 2	Steam pipes tested 20/2	Engine and boiler seatings 2/12
Engines holding down bolts 21/1	Completion of pumping arrangements 13/3	Boilers fixed 25/2
Engines tried under steam 15/3	Main boiler safety valves adjusted 15/3	Thickness of adjusting washers
STAR BOILER. CENTRE BOILER PORT BOILER DONKEY BOILER	STAR: .395 .73 .51 .435	PORT: .55 .355 .435 .511
Material of Crank shaft 1/4 steel	Identification Mark on Do. 5237-8-9 / 4242	Material of Thrust shaft 1/4 steel
Identification Mark on Do. 4247, 4196, 97 / 5250	12/06 / 2020	Material of Screw shafts 1/4 steel
Identification Marks on Do. 4247, 4196, 97 / 5250	12/06 / 2020	Identification Marks on Do. 4247, 4196, 97 / 5250
Material of Tunnel shafts	Identification Marks on Do. 4247, 4196, 97 / 5250	Material of Steam Pipes
Test pressure 576 lbs.		

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

These Engine 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 Register Book with the notation of **LMC 3,13.**

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.13.

F.D.

The amount of Entry Fee	£ Mk. : 62.-	When applied for,
Special	£ 945.-	1. 4. 1913
Donkey Boiler Fee	£ 43.-	When received,
Travelling Expenses (if any)	£ 30.-	12. 4. 1913

Committee's Minute

FRI APR. 25. 1913

Assigned

MACHINERY CERTIFICATE
 WRITTEN

Time 3.13

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



© 2020

Lloyd's Register
 Foundation