

REPORT ON MACHINERY.

Received at London Office TUE. FEB. 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 ss "LAUTERFELS"

(Number of Visits)

Master Volkmann Built at Bremen

By whom built Aktion Gesellschaft Weser

Gross 5811
Net 3643
When built 1913

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 Impfb. Ges. Hanza

Port belonging to Bremen

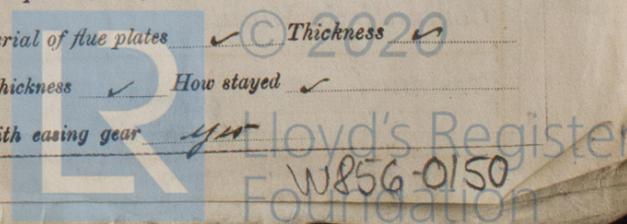
Nom. Horse Power as per Section 28 520

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 16 5/32 Material of screw shaft 1. M. 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 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 76"
 Dia. of Tunnel shaft 14 3/4 Dia. of Crank shaft journals 15 17/32 Dia. of Crank pin 15 9/16 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 1/8 Stroke 22 9/16 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/8 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 No. and size of Suctions connected to both Bilge and Donkey pumps 2 3/8, 2 3/8, 5/8
 In Engine Room 4 - 3 9/16 dia In Holds, &c. 2 in each hold - 3 9/16 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, Germany
 Total Heating Surface of Boilers 6950 Is Forced Draft fitted yes No. and Description of Boilers 3 cylindrical multibubular
 Working Pressure 192 lbs Tested by hydraulic pressure to 263 lbs Date of test 7.10.13 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. in. 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 174" Length 153" Material of shell plates 1. M. 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 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 Morison Material 1. M. Steel Outside diameter 43.2"
 Length of plain part top 67 bottom 67 Thickness of plates crown 67 bottom 82 Description of longitudinal joint welded No. of strengthening rings 1
 Working pressure of furnace by the rules 198 lb Combustion chamber plates: Material 1. M. Steel Thickness: Sides 62 Back 62 Top 67 Bottom 82
 Pitch of stays to ditto: Sides 8.3 x 7.1 Back 7.7 x 7.65 Top 8.3 x 7.9 If stays are fitted with nuts or riveted heads with Working pressure by rules 234 lb
 Material of stays Steel Diameter at smallest part 1.516 Area supported by each stay 65.5 sq. in. Working pressure by rules 212 lb End plates in steam space: Material 1. M. 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. M. Steel
 Diameter at smallest part 2.75 Area supported by each stay 229 sq. in. Working pressure by rules 220 lb Material of Front plates at bottom 1. M. Steel
 Thickness 1.06 Material of Lower back plate 1. M. Steel Thickness .94 Greatest pitch of stays 15.2 x 7.5 Working pressure of plate by rules 216 lb
 Diameter of tubes 3" Pitch of tubes 4.1" Material of tube plates 1. M. 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 199 lb Superheater or Steam chest; how connected to boiler connected on top Can the superheater be shut off and the boiler worked separately yes Diameter 15.8 in Length 15.8 in Thickness of shell plates 1.06 Material 1. M. Steel Description of longitudinal joint welded Diam. of rivet holes 1.34 Pitch of rivets 10 Working pressure of shell by rules 202 Diameter of flue 15.8 Material of flue plates 1. M. Steel Thickness 1.06
 If stiffened with rings yes Distance between rings 15.8 in Working pressure by rules 199 lb End plates: Thickness 1.06 How stayed yes
 Working pressure of end plates 199 lb Area of safety valves to superheater 15.8 in Are they fitted with easing gear yes



If not, state whether, and when, one will be sent

54.2 ft.
given as it
int.
System
Water Capacity.
Tons.
47.5
55.5
470
494
35.

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
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
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 washers 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 valves for air feed & high 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,
ACTIEN-GESSELLSCHAFT WESER
 Legmann & Co. 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

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, 13/2, 2/12 Propeller 2/11, 13/2, 2/12
 Stern tube 2/11, 13/2 Steam pipes tested 20/2 Engine and boiler seatings 2/12 Engines holding down bolts 2/11
 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: .395, .73, .51, .435, .435, .511, .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. P.A. 9.12
 Material of Tunnel shafts Identification Marks on Do. 4247, 4196, 97, 5250, 2106, 2020 Material of Screw shafts 1/4 steel Identification Marks on Do. H.K. 9.12, H.K. 9.12, P.A. 10.12, M.B. 9.12, M.B. 9.12
 Material of Steam Pipes Steel Test pressure 576 lbs.

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

J.W.D. 24/4/13. F.P.R.
 G. H. C. B.A.M.P.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee	£ Mk. 62.-	When applied for,
Special	£ 9.45.-	1.4.1913
Donkey Boiler Fee	£ 43.-	When received,
Travelling Expenses (if any)	£ 30.-	17.4.13

Committee's Minute
 Assigned
 MACHINERY CERTIFICATE
 WRITTEN
 FRI. APR. 25. 1913
 Home 3.13

Certificates (if required) to be sent to Bremen Office.

The Surveyor are requested not to write on or below the space for Committee's Minute.

Form No. 1A. Write "Bridge Sheer Strake" and "Upper Deck Sheer Strake" opposite the corresponding letter. Upper Deck Sheer Strake, Bridg. THK CLEA K DO DBLG Upper Len POOP SHOR FORE Upl Stri Sec Stri Br Stri FRA REV Pole Bows Riggi Sails

Rpt. 5.
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