

Copy

Please Advise  
No. 40.

## REPORT ON MACHINERY.

Port of *Helsing*

MON. 9 APR 1900

Received at London Office

18

No. in Survey held at *Grabow No*  
Reg. Book.Date, first Survey *20<sup>th</sup> April*Last Survey *16<sup>th</sup> Novbr* 1899(Number of Visits *17*)AS per Suppl on the *Steel Screw Steamer Emil Berenz*Tons { Gross *734*  
Net *380*Master *A. Becker* Built at *Grabow No* By whom built *Oderwerke*When built *1899*Engines made at *Grabow No* By whom made *Oderwerke*when made *1899*Boilers made at *Grabow No* By whom made *Oderwerke*when made *1899*Registered Horse Power *72* Owners *Th. Rodenacker*Port belonging to *Danzig*Nom. Horse Power as per Section 28 *72 (104)*Is Electric Light fitted *yes*ENGINES, &c.—Description of Engines *triple expansion*No. of Cylinders *3*No. of Cranks *3*Diameter of Cylinders *14.52, 23.8, 38.19* Length of Stroke *27.56* Revolutions per minute *110* Diameter of Screw shaft *as per rule 7.55"*Diameter of Tunnel shaft *as fitted 9 inch.* Diameter of Crank shaft journals *7.78* Diameter of Crank pin *7.78* Size of Crank webs *53.4 inch.*Diameter of screw *10.10"* Pitch of screw *10.2"* No. of blades *4* State whether moveable *no* Total surface *33.36 sq feet*No. of Feed pumps *2* Diameter of ditto *2 3/8* Stroke *14 1/2* Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2* Diameter of ditto *2 3/8* Stroke *14 1/2* Can one be overhauled while the other is at work *yes*No. of Donkey Engines *2* Sizes of Pumps *5 1/4, 3 3/4 and 5 1/2 x 4* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *three, 2" & 3 1/2"* In Holds, &c. *two, 2"*No. of bilge injections *1* sizes *—* Connected to condenser, or to circulating pump *Cond.* Is a separate donkey suction fitted in Engine room & size *yes, 2"*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 *direct on a box* 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*When were stern tube, propeller, screw shaft, and all connections examined in dry dock *when new* Is the screw shaft tunnel watertight *no tunnel fitted*Is it fitted with a watertight door *no* worked from *—* *engine is aft.*BOILERS, &c.—*As per approved plan.* (Letter for record *12. 29*) Total Heating Surface of Boilers *1985.58* sq feet Is forced draft fitted *no*No. and Description of Boilers *two cylindrical boilers* Working Pressure *170 lbs* Tested by hydraulic pressure to *340 lbs*Date of test *29. 4. 99* Can each boiler be worked separately *yes* Area of fire grate in each boiler *33.25* sq feet No. and Description of safety valves toeach boiler *one double valve of 2 5/16" & each* Area of each valve *4.09* sq inch Pressure to which they are adjusted *170 lbs* Are they fittedwith easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *5 15/16"* Mean diameter of boilers *10 1/2"*Length *9' 8 3/4"* Material of shell plates *steel* Thickness *1"* Description of riveting: circum. seams *lap joint 4 ft riveted long. seams all butt strap joints*Diameter of rivet holes in long. seams *1 3/16"* Pitch of rivets *7 1/16"* Lap of plates or width of butt straps *5 1/2" & 15 3/4"*Per centages of strength of longitudinal joint *123* Working pressure of shell by rules *193* Size of manhole in shell *11 3/16" x 15 3/4"*Size of compensating ring *1 3/8 x 5 15/16* No. and Description of Furnaces in each boiler *two plain* Material *steel* Outside diameter *37 1/4"*Length of plain part *top 27 9/16" bottom 27 9/16"* Thickness of plates *5/8"* Description of longitudinal joint *welded* No. of strengthening rings *two Adams*Working pressure of furnace by the rules *120* Combustion chamber plates: Material *steel* Thickness: Sides *5/8* Back *5/8* Top *1/16* Bottom *5/8*Pitch of stays to ditto: Sides *11 1/2" x 11 1/2"* Back *6 1/2"* Top *7 3/8" x 9 7/8"* If stays are fitted with nuts or riveted heads *with nuts* Working pressure by rules *190*Material of stays *iron* Diameter at smallest part *1 1/8"* Area supported by each stay *272* Working pressure by rules *260* End plates in steam space:Material *steel* Thickness *1 5/16"* Pitch of stays *14 3/16" x 15* How are stays secured *nuts* Working pressure by rules *170* Material of stays *iron*Diameter at smallest part *2 1/4"* Area supported by each stay *175* Working pressure by rules *225* Material of Front plates at bottom *steel*Thickness *1 5/16"* Material of Lower back plate *steel* Thickness *1 1/16"* Greatest pitch of stays *6 1/2"* Working pressure of plate by rules *170*Diameter of tubes *3 1/4"* Pitch of tubes *4 7/16"* Material of tube plates *steel* Thickness: Front *1 5/16"* Back *3/4"* Mean pitch of stays *8 15/16"*Pitch across wide water spaces *1 1/2"* Working pressures by rules *294* Girders to Chamber tops: Material *iron* Depth andthickness of girder at centre *6 5/16" & 1 9/16"* Length as per rule *25.6* Distance apart *7 7/8"* Number and pitch of Stays in each *two 9 7/16"*Working pressure by rules *183* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler workedseparately *—* Diameter *—* Length *—* Thickness of shell plates *—* Material *—* Description of longitudinal joint *—* Diam. of rivetholes *—* 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 *—*Lloyd's Register  
Foundation

STN1152-0010



DONKEY BOILER— Description *not on board*

Made at — By whom made — When made — Where fixed —  
Working pressure tested by hydraulic pressure to — No. of Certificate — Fire grate area — Description of safety valves —  
No. of safety valves — Area of each — Pressure to which they are adjusted — If fitted with easing gear — If steam from main boilers can enter the donkey boiler — Diameter of donkey boiler — Length — Material of shell plates — Thickness —  
Description of riveting long. seams — Diameter of rivet holes — Whether punched or drilled — Pitch of rivets —  
Lap of plating — Per centage of strength of joint — Rivets — 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 — Thickness of furnace crown plates — Stayed by — Working pressure of shell by rules —  
Working pressure of furnace by rules — Diameter of uptake — Thickness of uptake plates — Thickness of water tubes —

SPARE GEAR. State the articles supplied:— *Contracted but not yet on board*

*2 Valve-spiracles, 2 crank-pin, 2 crosshead-brasses, 1 set of bolts for crosshead-crank-pin and main bearings, 1 piston rod for air and circulation-pump, 1 compl. set of coupling-bolts, 2 compl. pump-lever-links 1 compl. set of valves for air-circulation-feed and bilges pumps, 10% studs for cylinder & slide valve chest and junk-ring bolts, 2% tubes of condenser and boiler, 1 set junk-ring springs, 1 spring for safety valves.*

The foregoing is a correct description,

*signed: Odenwerke*

Manufacturer.

Dates of Survey while building { During progress of work in shops — *once a fortnight, 12 times*  
During erection on board vessel — *once a week 10 times*  
Total No. of visits *22*

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

*The workmanship on boilers and machinery has been carried out very carefully as well in shops as on board the vessel to my complete satisfaction.*

*In my opinion the vessels boilers and the machinery are eligible to be classed in the Lloyds Register Book: **LMC 11.99.***

It is submitted that  
this vessel is eligible for  
THE RECORD **LMC. 11.99.**

*bona*  
*17/4/00.*

*A.S.*  
*18.4.00*

The amount of Entry Fee. . . £ *1* : *0* : — When applied for,  
Special . . . . . £ *10* : *10* : — *15<sup>th</sup> Dec. 1899*  
Donkey Boiler Fee . . . . . £ — : — : — When received,  
Travelling Expenses (if any) £ — : — : — *15<sup>th</sup> Dec. 1899*

Committee's Minute

Assigned

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

FRI. 3 AUG 1900

FRI. 27 APR 1900

*+ LMC 11.99.*

MACHINERY CERTIFICATE  
MAY 1900



© 2021

Lloyd's Register  
Foundation