

## REPORT ON MACHINERY.

No. 1204.

MON. 5 NOV 1906

Port of Bremerhaven

Received at London Office

19

Date, first Survey 30<sup>th</sup> Jan.Last Survey 3<sup>rd</sup> Novemb. 1906

No. in Survey held at Geestemünde

Reg. Book.

30 in Log on the Machinery &amp; Boilers of the steel Guardship S.S. Rotenfels

(Number of Visits)

Gross 5584

Net 3592

When built 1906

Master von Freden Built at Geestemünde By whom built Joh. C. Tecklenborg A. G.

Engines made at Geestemünde By whom made Joh. C. Tecklenborg A. G.

when made 1906

Boilers made at Geestemünde By whom made Joh. C. Tecklenborg A. G.

when made 1906

Registered Horse Power 504 Owners D. D. Ges. Hansa

Port belonging to Bremen

Nom. Horse Power as per Section 28 504

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines Two quadruple comp. and condensing No. of Cylinders 4 No. of Cranks 4

Dia. of Cylinders 24" 34 3/4" 50 3/8" 74" Length of Stroke 53 1/2" Revs. per minute 70 Dia. of Screw shaft as per rule 15 1/2" Material of S.M. steel as fitted 15 3/4" 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 8' 9"

Dia. of Tunnel shaft as per rule 13 3/4" Dia. of Crank shaft journals as per rule 14 1/4" Dia. of Crank pin 14 3/4" Size of Crank webs 9 1/2" x 11 1/2" Dia. of thrust shaft under

collars 14 3/4" Dia. of screw 19 4 3/8" Pitch of Screw 20" No. of Blades 4 State whether moveable Yes Total surface 103.83 sq'

No. of Feed pumps 2 Diameter of ditto 3 3/4" Stroke 27 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 5/8" Stroke 27 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 13 3/4" x 15 3/4" x 9 7/8" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 in Engine, 2 in Boiler room 3 1/2" diam. In Holds, &amp;c. 2 in every hold 3 1/2" diam.

No. of Bilge Injections 1 sizes 7 1/2" Connected to condenser, or to circulating pump Condenser Is a separate Donkey Suction fitted in Engine room &amp; size Yes 7 1/2"

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 Yes Are they Valves or Cocks Valves and 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 4 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 14<sup>th</sup> Sept. of Stern Tube 14<sup>th</sup> Sept. Screw shaft and Propeller 14<sup>th</sup> Sept. 1906.

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine room above deck.

BOILERS, &amp;c.—(Letter for record A) Manufacturers of Steel Thyssen &amp; Co at Mülheim

Total Heating Surface of Boilers 6456 sq' Is Forced Draft fitted Yes No. and Description of Boilers 3 cylindrical multitubular

Working Pressure 213 lb Tested by hydraulic pressure to 285 lb Date of test 16. 8. 06 No. of Certificate 84/25/06

Can each boiler be worked separately Yes Area of fire grate in each boiler 52 sq' No. and Description of Safety Valves to

each boiler 2 imp. spring valves Area of each valve 12.18 sq' Pressure to which they are adjusted 213 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 14' 0 3/8" Length 11' 11 3/8" Material of shell plates S.M. steel

Thickness 1 2 7/8" Range of tensile strength 29.2 to 33 tons Are the shell plates welded or flanged flanges Descrip. of riveting: cir. seams double

long. seams quadruple Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 10 5/8" Top of plates or width of butt straps 26 7/8"

Per centages of strength of longitudinal joint rivets 110% Working pressure of shell by rules 221 lb Size of manhole in shell 11 1/2" x 15 5/16"

Size of compensating ring 11" x 1 7/8" No. and Description of Furnaces in each boiler 3 Morrison Material S.M. steel Outside diameter 40 3/4"

Length of plain part top 3" Thickness of plates crown 1 1/8" Description of longitudinal joint welded No. of strengthening rings corrug.

Working pressure of furnace by the rules 238 lb Combustion chamber plates: Material S.M. steel Thickness: Sides 1 1/8" Back 1 1/8" Top 1 1/8" Bottom 1 3/4"

Pitch of stays to ditto: Sides 8 1/4" Back 7 7/8" Top 7 7/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 278 lb

Material of stays S.M. steel Diameter at smallest part 1 7/8" Area supported by each stay 58.4 sq' Working pressure by rules 295 lb End plates in steam space:

Material S.M. steel Thickness 1 7/8" Pitch of stays 14 5/16" How are stays secured nuts Working pressure by rules 250 lb Material of stays S.M. steel

Diameter at smallest part 2 5/8" Area supported by each stay 206 sq' Working pressure by rules 261 lb Material of Front plates at bottom S.M. steel

Thickness 1 3/8" Material of Lower back plate S.M. steel Thickness 6 3/4" Greatest pitch of stays 7 7/8" Working pressure of plate by rules 318 lb

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates steel Thickness: Front 1 8/16" Back 5 5/16" Mean pitch of stays 7 1/2"

Pitch across wide water spaces 13 3/8" Working pressures by rules 217 lb Girders to Chamber tops: Material S.M. steel Depth and

thickness of girder at centre 10 1/4" x 13 1/8" Length as per rule 35 7/16" Distance apart 7 5/16" Number and pitch of stays in each 3 x 7 7/8"

Working pressure by rules 263 lb 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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