

REPORT ON MACHINERY.

No. 11741

MON 28 NOV 1910

Port of *Hamburg*

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No. in Survey held at *Flensburg*Date, first Survey *12th Nov 1909*Last Survey *18th Dec 1910*

1910

Reg. Book.

on the *Steel L. L. "Elmsborn"*(Number of Visits *23*)Master *J. Hahn*Built at *Flensburg*By whom built *Flensburger Schiffbau Ges.*Tons Gross *4594*Net *3874*When built *1910*Engines made at *Flensburg*By whom made *Flensburger Schiffbau Ges.*when made *1910*Boilers made at *Flensburg*By whom made *Flensburger Schiffbau Ges.*when made *1910*Registered Horse Power *594*Owners *Deutsch Austral. Dampfschiff. Ges.*Port belonging to *Hamburg*Nom. Horse Power as per Section 28 *594*Is Refrigerating Machinery fitted for cargo purposes *no*Is Electric Light fitted *yes*ENGINES, &c.—Description of Engines *Triple Expansion*No. of Cylinders *3*No. of Cranks *3*Dia. of Cylinders *28 3/8, 47 1/4, 78"*Length of Stroke *54"*Revs. per minute *73*

Dia. of Screw shaft

as per rule *16 1/2"*Material of *Steel*as fitted *16 7/8"*

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 *5' 4.5"*

Dia. of Tunnel shaft

as per rule *14 7/16"*as fitted *14 7/8"*

Dia. of Crank shaft journals

as per rule *15 1/4"*as fitted *15 1/2"*Dia. of Crank pin *15 1/32"*Size of Crank webs *28 x 19"*

Dia. of thrust shaft under

collars *15 1/32"*Dia. of screw *18 1/2"*Pitch of Screw *17 1/2"*No. of Blades *4*State whether moveable *no*Total surface *83 sq. ft.*No. of Feed pumps *2*Diameter of ditto *4 1/8"*Stroke *3 1/2"*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2*Diameter of ditto *4 3/8"*Stroke *3 1/2"*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *4*Sizes of Pumps *see specification*

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *6-5 off 3 1/2, 1 off 4, 1 Tunnel recess, 2 Tunnel in Holds, &c.**12 off 3 1/2, 1 from Tanks 12 off 10 off 1, 2 off 3 1/2"*No. of Bilge Injections *1*sizes *7 1/2"*Connected to condenser, or to circulating pump *yes*Is a separate Donkey Suction fitted in Engine room & size *yes, 4"*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 *none*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 *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*Dates of examination of completion of fitting of Sea Connections *9/8. 10.*of Stern Tube *9/10. 10.*Screw shaft and Propeller *25/10. 10.*Is the Screw Shaft Tunnel watertight *yes*Is it fitted with a watertight door *yes*worked from *byld. platform*MILERS, &c.—(Letter for record *S*)Manufacturers of Steel *Blochwalzwerk Schenck & Knauth & Co.*Total Heating Surface of Boilers *8414*Is Forced Draft fitted *yes*No. and Description of Boilers *3 single ended multitubular*Working Pressure *185*Tested by hydraulic pressure to *370 lbs*Date of test *13/12/10*No. of Certificate *127, 128, 129*Can each boiler be worked separately *yes*Area of fire grate in each boiler *65.96 sq. ft.*

No. and Description of Safety Valves to

each boiler *2 Spring loaded*Area of each valve *12.629"*Pressure to which they are adjusted *125 lbs*Are they fitted with easing gear *yes*Smallest distance between boilers or uptakes and bunkers or woodwork *12"*Mean dia. of boilers *15 3/8"*Length *42' 0"*Material of shell plates *Steel*Thickness *1.25"*Range of tensile strength *455-51 lbs.*

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams *lap all riv.*Long. seams *double butt, gas riv.*Diameter of rivet holes in long. seams *1.5"*Pitch of rivets *20.5"*Lap of plates or width of butt straps *29.6" x 1.12"*

Percentage of strength of longitudinal joint

rivets *28.70%*plates *126.9%*Working pressure of shell by rules *195.1 lbs*Size of manhole in shell *12.5 x 16.5"*Size of compensating ring *8.7 x 1.2"*No. and Description of Furnaces in each boiler *3 horizontal*Material *Steel*Outside diameter *49.25"*

Length of plain part

top *4"*

Thickness of plates

bottom *1.65"*Description of longitudinal joint *welded*No. of strengthening rings *none*Working pressure of furnace by the rules *209.8 lbs*Combustion chamber plates: Material *Steel*Thickness: Sides *62"*Back *62"*Top *62"*Bottom *1 1/2"*Pitch of stays to ditto: Sides *7.5 x 7.5"*Back *7.5 x 7.5"*Top *7.5 x 7.5"*If stays are fitted with nuts or riveted heads *both*Working pressure by rules *220.9 lbs*Material of stays *Steel*Diameter at smallest part *1.37"*Area supported by each stay *59.29"*Working pressure by rules *228.9 lbs*

End plates in steam space:

Material *Steel*Thickness *1"*Pitch of stays *15"*How are stays secured *double nut with washers*Working pressure by rules *250.7 lbs*Material of stays *Steel*Diameter at smallest part *3"*Area supported by each stay *225.29 sq. in.*Working pressure by rules *328.2 lbs*Material of Front plates at bottom *Steel*Thickness *1 1/2"*Greatest pitch of stays *14"*Working pressure of plate by rules *226.8 lbs*Material of Lower back plate *Steel*Thickness *9"*Pitch of tubes *3.875 in.*Material of tube plates *Steel*Thickness: Front *1 1/2"*Back *9"*Mean pitch of stays *7.7"*Pitch across wide water spaces *14"*Working pressures by rules *215.6 lbs*Girders to Chamber tops: Material *Steel*

Depth and

thickness of girder at centre *9.8 x 1.3"*Length as per rule *33"*Distance apart *7.5"*Number and pitch of stays in each *3-7.8"*Working pressure by rules *215.6 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

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