

REPORT ON MACHINERY.

No. 4973

Port of Genoa Received at London Office WED. 21 JUN 1911
 No. in Survey held at Zurich Date, first Survey November 17-18 Last Survey Jan 24 1911
 Reg. Book. on the Screw Steamer No 9 (Number of Visits 7) 15/6/11 at Regensburg.
 Master Christoph Rethof Built at Regensburg By whom built Achtengesellschaft der Maschinenfabriken Gebrüder Weyss & Co Tons Gross 120 approx Net -
 Engines made at Zurich By whom made - when made 1911
 Boilers made at so By whom made so when made 1911
 Registered Horse Power - Owners The Golden Horn Steam Nav Co Port belonging to Constantinople
 Nom. Horse Power as per Section 28 27 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 11.02 + 18.9 Length of Stroke 11.8 Revs. per minute 240 Dia. of Screw shaft as per rule 4.4 Material of screw shaft steel
 as fitted 4.4
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight in the propeller boss -
 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 Yes with Gutta Percha Length of stern bush 19.68
 Dia. of Tunnel shaft as per rule 4.19 Dia. of Crank shaft journals as per rule 4.4 Dia. of Crank pin 4.4 Size of Crank webs 5 1/2 x 2 1/2 Dia. of thrust shaft under collars 4.4 Dia. of screw 4 1/2 x 24 Pitch of Screw 5 1/4 No. of Blades 4 State whether moveable no Total surface 5.49 sq ft
 No. of Feed pumps one Diameter of ditto 2.16 Stroke 4 Can one be overhauled while the other is at work -
 No. of Bilge pumps one Diameter of ditto 2.16 Stroke 4 Can one be overhauled while the other is at work -
 No. of Donkey Engines one Sizes of Pumps 3" x 2" x 3" No. and size of Suctions connected to both Bilge and Donkey pumps -
 In Engine Room one 2" In Holds, &c. Fore hold one 2", after hold one 2"
lock on after peak 1 1/2" Boiler Head pump on fore peak handle = 4 1/2" Pumps 1 1/2"
 No. of Bilge Injections one sizes 2 3/4" Connected to condenser, or to circulating pump Yes 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 Yes Are they Valves or Cocks Rolls
 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
 Are the pipes 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
 Is the examination of completion of fitting of Sea Connections 3/2/11 of Stern Tube 3/2/11 Screw shaft and Propeller 3/2/11
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door flange worked from -

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Thyssen & Co. Maschinenfabrik Ag. Essen
 Heating Surface of Boilers 650 sq ft Is Forced Draft fitted no No. and Description of Boilers one Horizontal Multitubular
 Working Pressure 150 lbs Tested by hydraulic pressure to 300 lbs Date of test 24.1.11 No. of Certificate 92
 Can each boiler be worked separately - Area of fire grate in each boiler 20.1 sq ft No. and Description of Safety Valves to boiler 2 Spring Area of each valve 5.1 sq in Pressure to which they are adjusted 150 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork - Mean dia. of boilers 80.7 Length 110.25 Material of shell plates steel
 Thickness 3/8 Range of tensile strength 25.4 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams double with Swedish iron Diameter of rivet holes in long. seams 3/8 Pitch of rivets 2.85 x 5.78 Lap of plates or width of butt straps 9.21 x 13.78
 Percentages of strength of longitudinal joint rivets 84.1 Working pressure of shell by rules 161 Size of manhole in shell 16 1/2 x 12 1/2
 Size of compensating ring 5.03 x .789 No. and Description of Furnaces in each boiler one corrugated Material steel Outside diameter 34.4
 Length of plain part top 6.8 Thickness of plates crown .44 Description of longitudinal joint welded No. of strengthening rings 9
 bottom 6.8 Working pressure of furnace by the rules 140.5 Combustion chamber plates: Material steel Thickness: Sides 1/2 Back 1/2 Top 1/2 Bottom 1/2
 Pitch of stays to ditto: Sides 6 x 6 Back 6 x 6 Top 6 x 6 If stays are fitted with nuts or riveted heads no Working pressure by rules 144.5
 Material of stays steel Diameter at smallest part 1 1/8 Area supported by each stay 36 sq in Working pressure by rules 192 End plates in steam space: no
 Material steel Thickness 25/32 Pitch of stays 14.5 x 8.5 How are stays secured thin washers Working pressure by rules 150 Material of stays steel
 Diameter at smallest part 2 1/4 Area supported by each stay 180 sq in Working pressure by rules 146.25 Material of Front plates at bottom steel
 Thickness 3/32 Material of Lower back plate steel Thickness 19/32 Greatest pitch of stays 6 x 6 Working pressure of plate by rules 250
 Diameter of tubes 2 1/4 Pitch of tubes 3.58 x 3.38 Material of tube plates steel Thickness: Front 25/32 Back 25/32 Mean pitch of stays 9 3/8
 Pitch across wide water spaces - Working pressures by rules 248 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 4.72 x 1.1 Length as per rule 14.7 Distance apart 6 Number and pitch of stays in each 2-6
 Working pressure by rules 200 Superheater or Steam chest; how connected to boiler joint Can the superheater be shut off and the boiler worked separately no Diameter 35.5 Length 35.5 Thickness of shell plates 15 Material steel Description of longitudinal joint welded Diam. of rivet holes 3/32 Pitch of rivets - Working pressure of shell by rules 150 Diameter of flue - Material of flue plates - Thickness -
 If stiffened with rings no Distance between rings - Working pressure by rules - End plates: Thickness 1/2 How stayed -
 Working pressure of end plates 150 Area of safety valves to superheater - Are they fitted with easing gear -

VERTICAL DONKEY BOILER— Manufacturers of Steel *Rone*

No.	Description		
Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate
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		Date of adjustment
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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey

SPARE GEAR. State the articles supplied:— *2 Connecting Rod bottom end bolts & nuts. There are no top end bolts, & no common piston springs in this engine. 2 main bearing bolts & nuts. One set of coupling bolts each for flywheel and intermediate shaft couplings. One set of feed & helge pump valves. A quantity of assorted bolts & nuts, and iron of various sizes.*

Aktiengesellschaft der Maschinenfabriken
ESCHER WYSS & C^{IE}

W. H. H. H. H.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops— *1910. Nov 14. 23. Dec 2. 1911. Jan 24th*
 During erection on board vessel— *At Regensburg 1911. 3 Feb. 5 April 11. May. 15 June.*
 Total No. of visits *= 8*

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—	Cylinders	as above	Slides	<i>do</i>	Covers	<i>do</i>	Pistons	<i>do</i>	Rods	<i>do</i>	
Connecting rods	<i>do</i>	Crank shaft	<i>do</i>	Thrust shaft	<i>do</i>	Tunnel shafts	<i>do</i>	Screw shaft	<i>do</i>	Propeller	<i>do</i>
Stern tube	<i>do</i>	Steam pipes tested	<i>11/5/11.</i>	Engine and boiler seatings	<i>3/2/11.</i>	Engines holding down bolts	<i>11/5/11.</i>				
Completion of pumping arrangements	<i>15/6/11.</i>	Boilers fixed	<i>11/5/11.</i>	Engines tried under steam	<i>15/6/11.</i>						
Main boiler safety valves adjusted	<i>15/6/11.</i>	Thickness of adjusting washers	<i>13.5 x 14 x 11</i>								
Material of Crank shaft	<i>Steel</i>	Identification Mark on Do.	<i>Lloyd 25390/12 R.H. 9.10</i>	Material of Thrust shaft	<i>Steel</i>	Identification Mark on Do.	<i>Lloyd 20590/12 R.H. 9.10</i>				
Material of Tunnel shafts	"	Identification Marks on Do.	<i>Lloyd 20256/1 R.H. 10.10</i>	Material of Screw shafts	"	Identification Marks on Do.	<i>Lloyd 20456/1 R.H. 10.10</i>				
Material of Steam Pipes	<i>Copper</i>	Test pressure	<i>300 lbs.</i>								

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery and boiler has been examined during construction at the works of the maker with a view to its being classed + L.M.C. work date. The materials and workmanship are good and in accordance with the requirements of the rules & the approved plans. The boiler has been tested by water pressure at 300 lbs and found tight & sound, and has been stamped* *No 92 Lloyd's List 300 lbs M.A. 27.1.10* *. The engines were erected, and will be forwarded to Regensburg together with the boiler, to be fitted on board of the ship. To complete the survey, the following remains to be done, viz: The engines & boiler to be seen fitted on board, the main steam pipe to be tested by hydraulic pressure; the pipe arrangements to be verified with the amended designs. The spare gear to be checked, the engines to be seen running under steam, and the safety valves to be adjusted to the working pressure of 150 lbs per sq. inch.*

Truste. The above noted requirements have been duly carried out to my satisfaction & the case is eligible in my opinion for the notation + L.M.C. *G. Hitchie*

The amount of Entry Fee..	£ 25.30	When applied for,	<i>Feb 1st 1911</i>
Special ..	£ 200.40	When received,	<i>Feb 9th 1911</i>
Donkey Boiler Fee ..	£		
Travelling Expenses (if any)	£ 113.60		
<i>See 95.90 to be credited to trustee</i>	<i>341.30</i>		

TUE. 27 JUN 1911

+ L.M.C. 11

MACHINERY CERTIFICATE WRITTEN



Certificate (if required) to be sent to the office

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

Committee's Minute
Assigned

My part for due time.