

## REPORT ON MACHINERY.

No. 5362

Received at London Office

THE 4 APR. 1922

Date of writing Report *Mar 15* 19 *22* When handed in at Local Office *Mar 31* 19 *22* Port of *Trieste*

No. in Survey held at *Monfalcone* Date, First Survey *11. 8. 1921* Last Survey *13. 3. 1922*  
Reg. Book. on the *S. S. Lucia (yard No 144 Cant. Navale Triestino)* (Number of Visits *32*) Tons { Gross *6100*  
Net *3631*

Master *G. Camlich* Built at *Monfalcone* By whom built *Cantiere Navale Triestino* When built *1922*  
Engines made at *Immer* By whom made *United Machine Factories Ltd* when made *1922*  
Boilers made at *Hönigsmatz (Praga)* By whom made *United Machine Factories Ltd.* when made *1922*  
Registered Horse Power *483* Owners *Cantiere Navale Triestino* Port belonging to *Trieste*  
Nom. Horse Power as per Section 28 *483* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*

Also see *Prague Report No. 12*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*  
Dia. of Cylinders *26 3/8 x 42 x 70* Length of Stroke *48* Revs. per minute *75* Dia. of Screw shaft as per rule *14.72* Material of *S.M.S.*  
as fitted *14.96* 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 *61*  
Dia. of Tunnel shaft as per rule *13.07* Dia. of Crank shaft journals as per rule *13.7* Dia. of Crank pin *13.97* Size of Crank webs *8.85 x 27* Dia. of thrust shaft under  
collars *13.97* Dia. of screw *17-6 5/8* Pitch of Screw *14-7 5/8* No. of Blades *4* State whether moveable *no* Total surface *104*  
No. of Feed pumps *2* Diameter of ditto *4.13* Stroke *23.6* Can one be overhauled while the other is at work *yes*  
No. of Bilge pumps *2* Diameter of ditto *4.5* Stroke *23.6* Can one be overhauled while the other is at work *yes*  
No. of Donkey Engines *4* Sizes of Pumps { *10 1/2 x 12 x 9 3/4 Ballast*  
*8 1/2 x 8 1/2 x 7 3/4 Circulating* No. and size of Suctions connected to both Bilge and Donkey pumps  
*9 3/4 x 4 x 6 Donkey*  
In Engine Room *4 x 3 1/2* Feed In Holds, &c. *2 in each hold 2 3/2*

No. of Bilge Injections *1* sizes *6.89* Connected to *condenser* or to circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *yes 3 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 *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*  
Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door *yes* worked from *top of cylinders*

BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Wittmayer Berg. u. Eisenwerke A.G. & Jelenkirkham Berg. u. E.*

Total Heating Surface of Boilers *7221* Is Forced Draft fitted *yes* No. and Description of Boilers *3 S.B. (No. 10005-6-7)*  
Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs* Date of test *14-10-21* No. of Certificate *248,249,250*  
Can each boiler be worked separately *yes* Area of fire grate in each boiler *49.29* No. and Description of Safety Valves to  
each boiler *2 Imp. Spring loaded* Area of each valve *7.79* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *yes*  
Smallest distance between boilers or uptakes and bunkers or woodwork *6'* Mean dia. of boilers *180* Length *141* Material of shell plates *S.M.S.*  
Thickness *1.22* Range of tensile strength *28-32 tons* Are the shell plates welded or flanged — Descrip. of riveting: cir. seams *double lap*,  
long. seams *butt D.B.* Diameter of rivet holes in long. seams *1.3* Pitch of rivets *8.65* Lap of plates or width of butt straps *19.5*  
Per centages of strength of longitudinal joint rivets *93.27%* Working pressure of shell by rules *180.8 lbs* Size of manhole in *end plate 11.8 x 15.7*  
plate *85.00%* Size of compensating ring — No. and Description of Furnaces in each boiler *3 Morrison's* Material *steel* Outside diameter *47.2*  
Length of plain part top Thickness of plates crown *0.61* Description of longitudinal joint *welded* No. of strengthening rings —  
bottom Thickness of plates bottom  
Working pressure of furnace by the rules *181.5* Combustion chamber plates: Material *S.M.S.* Thickness: Sides *.629* Back *.629* Top *.629* Bottom *.826*  
Pitch of stays to ditto: Sides *8.46 x 8.46* Back *8.00 x 8.46* Top *7.87 x 8.46* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *190 lbs*  
Material of stays *steel* Area at smallest part *1.7* Area supported by each stay *69* Working pressure by rules *224 lbs* End plates in steam space:  
Material *steel* Thickness *1.1* Pitch of stays *15.75* How are stays secured *nut & washer* Working pressure by rules *198 lbs* Material of stays *steel*  
Area at smallest part *5.049* Area supported by each stay *248* Working pressure by rules *211* Material of Front plates at bottom *steel*  
Thickness *.94* Material of Lower back plate *steel* Thickness *.82* Greatest pitch of stays *13.2 x 8.4* Working pressure of plate by rules *190*  
Diameter of tubes *3.5* Pitch of tubes *4.4 x 4.2* Material of tube plates *steel* Thickness: Front *.94* Back *.78* Mean pitch of stays *8.4 x 8.5*  
Pitch across wide water spaces *13.58* Working pressures by rules *185* Girders to Chamber tops: Material *steel* Depth and  
thickness of girder at centre *9.4* Length as per rule *36.6* Distance apart *7.87* Number and pitch of stays in each *3 x 8.46*  
Working pressure by rules *194* Steam dome: description of joint to shell % of strength of joint  
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type *Schmidt* Date of Approval of Plan Tested by Hydraulic Pressure to *540 lbs*  
Date of Test *1920* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *yes*  
Diameter of Safety Valve *1* Pressure to which each is adjusted *185 lbs* Is Easing Gear fitted *no*

010294-010291-0239



IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two bottom and bottom end bolts 2 mts. Two top end bolts 2 mts. Two main bearings bolts 3 mts. One set of coupling bolts and nuts. One set of feed and bilge pump valves. One propeller. One propeller shaft. One set of crank pin and one set of cross head bearings. 12 holding down bolts. One set of piston ring for each cylinder. 6 junk ring bolts. 6 cylinder cover bolts and 6 valve cover bolts. One spare spring for all safety valves on boilers and engine. One slide valve spindle. One air pump bucket rod. 20 condenser tubes and 200 formules. 20 Boiler tubes. 60 plugs for super heaters. Assorted quantity of bolts, nuts, bars and sheet iron. Spare pieces for auxiliaries.

The foregoing is a correct description,

Vereinigte Maschinenfabriken A. G.  
vormals Skoda, Ruston, Bromovsky & Ringhoffer

Ing. Arnold

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }  
{ During erection on board vessel - - }  
Total No. of visits Thirteen

1921 Aug 11, 27, Sep 15, 23, Oct 9, 14, Nov 21, Dec 13, 14, 15, 16, 19, 23, 30, 1922 Jan 9, 10, 12, 18, 26, Feb 2, 3, 13, 15, 20, 24, Mar 2, 8, 9, 11, 13

Is the approved plan of main boiler forwarded herewith ✓

also see Prague Report No 12

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 11.8.21 Slides 21.11.21 Covers 11.8.21 Pistons 11.8.21 Rods 11.8.21

Connecting rods 24.2.22 Crank shaft 11.8.21 Thrust shaft 11.8.21 Tunnel shafts 11.8.21 Screw shaft 11.8.21 Propeller 2.2.22

Stern tube 11.8.21 Steam pipes tested 10.1.22, 2.2.22 Engine and boiler seatings 14.15.12.21 Engines holding down bolts 24.2.22

Completion of pumping arrangements 20.2.22 Boilers fixed 18.1.22 Engines tried under steam 11.3.22

Completion of fitting sea connections 14.1.22 Stern tube 11.8.21 Screw shaft and propeller

Main boiler safety valves adjusted 11.3.22

Thickness of adjusting washers

14  
19

14  
14

14  
14

Material of Crank shaft S.M.S. Identification Mark on Do. 4835 MK 8.20 Material of Thrust shaft S.M.S. Identification Mark on Do. 4836 MK 8.20

Material of Tunnel shafts S.M.S. Identification Marks on Do. 1007-8.9.10.11 MB 9.18 Material of Screw shafts S.M.S. Identification Marks on Do. 4670 MK 4.20

Material of Steam Pipes steel

Test pressure 550 lbs

Is an installation fitted for burning oil fuel yes

Is the flash point of the oil to be used over 150° F. yes

Have the requirements of Section 49 of the Rules been complied with yes

Is this machinery duplicate of a previous case yes with If so, state name of vessel S.S. Anna No 48 Aust. Nav. Trieste  
exception of the oil burning arrangement

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

The machinery of this vessel has been built at Praga under special survey and has been satisfactorily fitted on board by the Antenne Navale Triestino at Monfalcone. The Boilers have been partly built at Häufiggrätz and completed at Monfalcone and on completion satisfactorily tested by hydraulic pressure. The Engine, Boilers and auxiliaries have been examined and tested at full working condition and found satisfactory. The installation for oil fuel has been fitted in accordance with the Section 49 of the Rule and satisfactorily tested. It is submitted the machinery of this vessel is eligible for the notation of + L M C 3.22 "Fitted for oil fuel 3.22 F.P. above 150° F."

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

When applied for,

When received,

Committee's Minute FRI 5 MAY 1922

Assigned

+ L M C 3.22 7 D. 6. 1

Fitted for oil fuel 3.22

F.P. above 150° F.

Engineer Surveyor to Lloyd's Register of Shipping.



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