

REPORT ON MACHINERY.

No. 47848

Port of *Newcastle*

No. in Survey held at *Newcastle* Date, first Survey *July 25* Last Survey *Nov 5 1904*
 Reg. Book. *3/5* *Grof Istvan Istvan* (Number of Visits *27*) Gross *2666*
 Master *G. Vannich* Built at *Newcastle* By whom built *W. Dobson & Co.* Tons Net *1726*
 Engines made at *Newcastle* By whom made *H. & M. Lang & Co. Ltd.* When built *1904*
 Boilers made at *"* By whom made *"* when made *1904*
 Registered Horse Power *"* Owners *Hungarian Levant S.S. Co. Ltd.* Port belonging to *Y. M. M.*
 Nom. Horse Power as per Section 28 *311* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*

ENGINES, &c.—Description of Engines *In C.P.D.*No. of Cylinders *3* No. of Cranks *3*

Dia. of Cylinders *23 3/4 39 60* Length of Stroke *45* Revs. per minute *65* Dia. of Screw shaft *as per rule 13.85* Material of *Iron*
 as fitted *1.22* screw shaft

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 *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 *yes* Length of stern bush *5' 1"*

Dia. of Tunnel shaft *as per rule 11.9* Dia. of Crank shaft journals *as per rule 12.5* Dia. of Crank pin *1.0 3/4* Size of Crank webs *24 1/2 x 8 1/2* Dia. of thrust shaft under
 as fitted *1.0 3/4* collars *1.0 3/4* Dia. of screw *16 ft.* Pitch of screw *16 ft.* No. of blades *4* State whether moveable *f* Total surface *80 ft*

No. of Feed pumps *2* Diameter of ditto *3 1/4* Stroke *2 ft.* Can one be overhauled while the other is at work *yes*
 No. of Bilge pumps *2* Diameter of ditto *3 1/2* Stroke *2 ft.* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *2* Sizes of Pumps *8 x 10 x 10 1/2 x 5 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *4 of 3 1/2 of 3 1/2* In Holds, &c. *2 of 3 in all holds*

No. of bilge injections *1* sizes *4* Connected to condenser, or to circulating pump *C.P.* 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 *—*

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both*
 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 *New Vessel* Is the screw shaft tunnel watertight *yes*
 Is it fitted with a watertight door *yes* worked from *top platform*

BOILERS, &c.— (Letter for record *S.*) Total Heating Surface of Boilers *4712 ft* Is forced draft fitted *no*

No. and Description of Boilers *2 marine type* Working Pressure *180 lb* Tested by hydraulic pressure to *360 lb*

Date of test *11-10-04* Can each boiler be worked separately *yes* Area of fire grate in each boiler *64 ft* No. and Description of safety valves to
 each boiler *2 Spring* Area of each valve *8.29* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *2 feet* Mean dia. of boilers *15' 8"* Length *10' 6"* Material of shell plates *S*
 Thickness *1 1/2* Range of tensile strength *29 3/2* Are they welded or flanged *Ends* Descrip. of riveting: cir. seams *a r. lap* long. seams *a butt strap*

Diameter of rivet holes in long. seams *1 3/8* Pitch of rivets *9"* Lap of plates or width of butt straps *19"*
 Per centages of strength of longitudinal joint *87* Working pressure of shell by rules *181* Size of manhole in shell *16 x 12"*

Size of compensating ring *flanged* No. and Description of Furnaces in each boiler *3 Berg's* Material *S* Outside diameter *50 1/2*
 Length of plain part *top 34* Thickness of plates *bottom 34* Description of longitudinal joint *weld* No. of strengthening rings *—*

Working pressure of furnace by the rules *187* Combustion chamber plates: Material *S* Thickness: Sides *1 1/8* Back *1 1/8* Top *1 1/8* Bottom *1 1/2*
 Pitch of stays to ditto: Sides *9 3/8 x 9 1/2* Back *9 3/8 x 9 1/2* Top *9 1/2 x 9 3/8* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *183*

Material of stays *S* Diameter at smallest part *1.48* Area supported by each stay *89"* Working pressure by rules *180* End plates in steam space:
 Material *S* Thickness *1 1/8* Pitch of stays *25 x 2 1/2* How are stays secured *a nuts* Working pressure by rules *180* Material of stays *S*

Area at smallest part *8.9* Area supported by each stay *537* Working pressure by rules *182* Material of Front plates at bottom *S*
 Thickness *3 1/2* Material of Lower back plate *S* Thickness *1 1/8* Greatest pitch of stays *14 1/2* Working pressure of plate by rules *200*

Diameter of tubes *3 1/4* Pitch of tubes *4 1/2 x 4 3/8* Material of tube plates *S* Thickness: Front *3 1/2* Back *4* Mean pitch of stays *8.87*
 Pitch across wide water spaces *14 1/2* Working pressures by rules *185 lb* Girders to Chamber tops: Material *S* Depth and
 thickness of girder at centre *8 1/2 x 1 1/2* Length as per rule *30'* Distance apart *9 3/8* Number and pitch of Stays in each *2 of 9 1/2*

Working pressure by rules *186* Superheater or Steam chest; how connected to boiler *none* 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

DONKEY BOILER— No. 1 Description Multitubular

Made at Stockholm By whom made J. Sudron

When made 1903 Where fixed Stockholm

Working pressure 80 lb tested by hydraulic pressure to 160 lb No. of Certificate 3103 Fire grate area 25 sq ft Description of safety valves 2 Spring

No. of safety valves 2 Area of each 4.9 Pressure to which they are adjusted 85 If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no

Dia. of donkey boiler 9 ft Length 9 ft Material of shell plates S Thickness 5/8 Range of tensile strength 32 Descrip. of riveting long. seams lap 2 rod

Dia. of rivet holes 2 1/2 Whether punched or drilled D Pitch of rivets 3 1/2 Lap of plating 5 1/2 Per centage of strength of joint 75.5 Rivets 83 Thickness of shell iron plates 5/8 Radius of do. — No. of Stays to do. 4

Dia. of stays 2 1/2 Diameter of furnace Top 2' 9" Bottom 1' 7" Length of furnace 6 ft Thickness of furnace plates 7/8 B 1/2 Description of joint lap Sing

Thickness of furnace crown plates 5/8 + 9/16 Stayed by 1 1/4 + 1 3/4 stay @ 4 x 8" Working pressure of shell by rules 81.4

Working pressure of furnace by rules 86.5 Diameter of tubes 3" Thickness of tube plates 5/8 Thickness of stay tubes 5/16

SPARE GEAR. State the articles supplied:— 1 set connecting rod bolts + nuts. 2 main bearing bolts + nuts. 1 set coupling bolts + nuts. 1 set feed and bilge pump valves. propeller + shaft. nuts bolts and iron

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer. Main engines + boilers

J. J. Findlay

Dates of Survey while building During progress of work in shops — During erection on board vessel — Assist. Secretary. 1904 July 25 26 27 29 Aug 25 26 Sep 1 2 6 8 13 14 22 26 27 29 Oct 3 7 10 11 13 17 19 21 22 31

Total No. of visits 27

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " yes

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery and boilers constructed under special survey. materials and workmanship good. engines examined under full working conditions and found satisfactory. In my opinion this vessel is eligible for the record in the Register Book of L.M.C. 11/04

It is submitted that this vessel is eligible for THE RECORD L.M.C. 11.04 ELEC:LIGHT.

J. J. Findlay
8.11.04

Ans.
8.11.04

The amount of Entry Fee.. £ 3 : : : When applied for, 4 NOV 1904
Special £ 35 : 11 : :
Donkey Boiler Fee £ : : : When received, 7 NOV 1904
Travelling Expenses (if any) £ : : : 11.04

Committee's Minute

TUES. 8 NOV 1904

Assigned

L.M.C. 11.04
elec light

MACHINERY CERTIFICATE
WRITTEN.

J. J. Findlay

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



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Foundation