

REPORT ON MACHINERY.

No. 47848

Port of Newcastle

No. in Survey held at Newcastle Date, first Survey July 25 Received at London Office Nov 6 1904
 Reg. Book. 3/5 on the Grof Istvan Istvan Last Survey Nov 5 1904
 Master Umannich Built at Newcastle By whom built W Dobson & Co (Number of Visits 27) Gross Tons 2666
 Engines made at Newcastle By whom made H. & M. Langbein & Co when made 1904 Net Tons 1726
 Boilers made at " By whom made " when made 1904
 Registered Horse Power " Owners Hungarian Levant S. S. Co Ltd Port belonging to Fiume
 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 Cp'd. No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 23 3/8 39 66 Length of Stroke 45 Revs. per minute 65 Dia. of Screw shaft as per rule 13.85 Material of screw shaft Iron
 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 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 sq
 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 & 7 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 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 sized 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 sq Is forced draft fitted no
 No. and Description of Boilers 2 marine type Working Pressure 180 lb Tested by hydraulic pressure to 360 lbs
 Date of test 11-10-04 Can each boiler be worked separately yes Area of fire grate in each boiler 64 sq 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 29/32 Are they welded or flanged ends Descrip. of riveting: cir. seams a 7. lap long. seams a 7. lap long
 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 64 Description of longitudinal joint weld No. of strengthening rings ✓
 Working pressure of furnace by the rules 187 Combustion chamber plates: Material S Thickness: Sides 1/8 Back 1/8 Top 1/8 Bottom 1 1/32
 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 1/8 Pitch of stays 25 x 2 1/2 How are stays secured a nuts Working pressure by rules 180 Material of stays S
 Diameter at smallest part 8.9 Area supported by each stay 537 Working pressure by rules 182 Material of Front plates at bottom S
 Thickness 3/32 Material of Lower back plate S Thickness 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 3/32 Back 1/8 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 Stockton 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 400 If steam from main boilers can enter the donkey boiler no. Dia. of donkey boiler 9 ft Length 9 ft Material of shell plates D Thickness 1/2 Range of tensile strength 32 Descrip. of riveting long. seams lap & rod Dia. of rivet holes 27/32 Whether punched or drilled D Pitch of rivets 3/16
 Lap of plating 5/16 Per centage of strength of joint Rivets 83 Thickness of shell iron plates 5/8 Radius of do. — No. of Stays to do. 4
 Dia. of stays 2 1/8 Diameter of furnace Top 2' 9" Bottom 1' 7" Length of furnace 6 ft Thickness of furnace plates T 7/8 B 1/2 Description of joint lap Sing Thickness of furnace crown plates 1/2 + 9/16 Stayed by 1 1/4 + 1 3/8 stays @ 4 x 8" Working pressure of shell by rules 81.7
 Working pressure of furnace by rules 86.5 Diameter of uptake tubes 3" Thickness of uptake plates 5/8 Thickness of water 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 — ASSIST. SECRETARY. 1904 July 25, 26, 27, 29, Aug 25, 26, Sep 1, 2, 6, 8, 12, 14, 22, 26, 27, 29, Oct 3, 7, 10, 11, 13, 17, 19, 21, 22, 31
 During erection on board vessel — naus
 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
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) £ : : : :

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

Committee's Minute TUES. 8 NOV 1904

Assigned L.M.C. 11.04 MACHINERY CERTIFICATE WRITTEN. elec light

