

REPORT ON MACHINERY

No. 55017

SAT. 4 JUL 1908

Port of Newcastle on Tyne

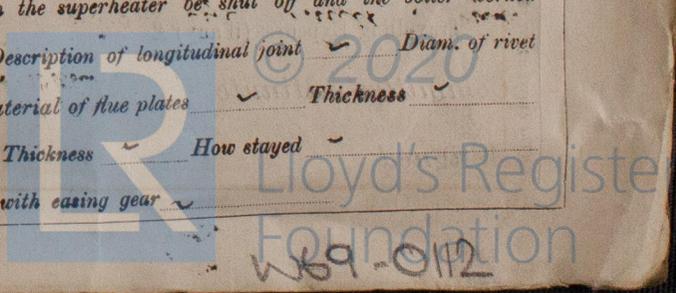
Received at London Office

No. in Survey held at Newcastle Date, first Survey Oct 9 Last Survey 29 June 1908
 Reg. Book. 63 on the Steel S. S. "INDIANIC" (Number of Visits 51)
 Master H. Schmid Built at Newcastle By whom built Hawthorn Leslie & Co. L^{td} Tons } Gross 4259
 Engines made at Newcastle By whom made Hawthorn Leslie & Co. L^{td} when made 1908 Net 2401
 Boilers made at D^o By whom made D^o when made 1908.
 Registered Horse Power _____ Owners Rederiaktiel Transatlantisk Port belonging to Gothenburg
 Nom. Horse Power as per Section 28 492 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 27 1/2 - 46 - 76 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft 15 1/8 Material of Ingot Steel
 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 yes 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 yes If two
 liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 60
 Dia. of Tunnel shaft 13.5 as per rule 13.5 Dia. of Crank shaft journals 14 1/4 as per rule 14 1/4 Dia. of Crank pin 14 1/4 Size of Crank webs 9 5/8 Dia. of thrust shaft under
 collars 14 1/4 as fitted 17 3/4 Dia. of screw 18 - 3 Pitch of Screw 18 - 3 No. of Blades 4 State whether moveable yes Total surface 100 sq
 No. of Wear Feed pumps Duplex Diameter of ditto 8 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 26 Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps F. 7x5x8. B 9x10x10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Four 3 1/2 In Holds, &c. In all holds Two 3 1/2
Tunnel Well No 3
 No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump CP 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 yes
 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 & below
 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 F^{or} bilge Suctions How are they protected Strong Wood Casings
 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 29-4-08 of Stern Tube 29-4-08 Screw shaft and Propeller 17-6-08
 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) Manufacturers of Steel Spencer & Son
 Total Heating Surface of Boilers 6690 sq Is Forced Draft fitted yes No. and Description of Boilers Two, Cyl. Mult. S^{td}
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 8-2-08 No. of Certificate 7683
 Can each boiler be worked separately yes Area of fire grate in each boiler 77 sq No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 11-8 Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 21 ^{outside} Mean dia. of boilers 16-9 Length 12-0 Material of shell plates S
 Thickness 21-5 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d lap
 long. seams d shop Diameter of rivet holes in long. seams 17/16 Pitch of rivets 9 9/16 Emp of plates or width of butt straps 22
 Per centages of strength of longitudinal joint rivets 93 Working pressure of shell by rules 183 Size of manhole in shell 16x12
 plate 85
 Size of compensating ring Flange No. and Description of Furnaces in each boiler 4 Brighton Material S Outside diameter 46 1/4
 Length of plain part top Thickness of plates orow 9/16 Description of longitudinal joint Weld No. of strengthening rings yes
 Working pressure of furnace by the rules 191 Combustion chamber plates: Material S Thickness: Sides 1/8 Back 1/16 Top 1/16 Bottom 1
 Pitch of stays to ditto: Sides 10x8 1/2 Back 9 1/2 x 9 1/2 Top 10x8 1/2 If stays are fitted with nuts or riveted heads nut Working pressure by rules 181
 Material of stays S ^{area} Diameter at smallest part 1-889 Area supported by each stay 90-25 Working pressure by rules 187 End plates in steam space:
 Material S Thickness 18-5 Pitch of stays 20x16 How are stays secured d n + w Working pressure by rules 182 Material of stays S
^{area} Diameter at smallest part 6-1 Area supported, by each stay 32-0 Working pressure by rules 190 Material of Front plates at bottom S
 Thickness 1 Material of Lower back plate S Thickness 3/32 Greatest pitch of stays as per plan Working pressure of plate by rules 180
 Diameter of tubes 2 1/2 Pitch of tubes 3 5/8 + 3 3/4 Material of tube plates S Thickness: Front 7/8 Back 12-5 Mean pitch of stays 11
 Pitch across wide water spaces 12 5/8 Working pressures by rules 184 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 9x13/8 Length as per rule 30-6 Distance apart 8 1/2 Number and pitch of stays in each Two 10
 Working pressure by rules 205 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked
 separately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet
 holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes
 Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

At test, state whether, and when, one will be sent



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description See attached sheet. Made at By whom made When made Where fixed Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams Rivets Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Plates Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint 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:— Propeller blades, Tail shaft, Crank shaft, Two top end, two main bearings, two bottom end & one set coupling bolts, feed & filge valves, piston springs, A.P. Rod, assorted bolts & nuts & other small gear.

For R. & W. HAWTHORN, LESLIE & CO. LIMITED. The foregoing is a correct description, M. Allan Manufacturer. DIRECTOR

Dates of Survey while building: During progress of work in shops - 1907 Oct. 9, 15, 18, 30. Nov. 8, 9, 12, 15, 19, 20, 22. Dec. 4, 11, 17, 31. 1908 Jan. 7, 8, 12, 15, 18, 21, 24, 28. Feb. 5, 8, 10, 12, 13, 14, 18, 25, 26. Mar. 13. During erection on board vessel - 17, 26. Apr. 23, 29. May 8, 12, 18, 21, 25, 28. June 1, 11, 12, 18, 15, 16, 17, 27. Total No. of visits 51. Is the approved plan of main boiler forwarded herewith Yes. " " " donkey " " " Yes.

Dates of Examination of principal parts—Cylinders 31-12-07 Slides 31-12-07 Covers 31-12-07 Pistons 31-12-07 Rods 7-1-08 Connecting rods 7-1-07 Crank shaft 28-1-08 Thrust shaft 28-1-08 Tunnel shafts 18-1-08 Screw shaft 28-1-08 Propeller 8-5-08 Stern tube 31-12-07 Steam pipes tested 8-5-08 13-6-08 11-6-08 Engine and boiler seatings 10-2-08 Engines holding down bolts 15-6-08 Completion of pumping arrangements 16-6-08 Boilers fixed 15-6-08 Engines tried under steam 16-6-08 Main boiler safety valves adjusted 16-6-08 Thickness of adjusting washers P.C. 0 7/16 0 3/8 0 1/2 0 5/8 0 3/4 0 15/32 5/8 Material of Crank shaft I Steel Identification Mark on Do. J. H. H. 1908 Material of Thrust shaft I Steel Identification Mark on Do. J. H. H. 1908 Material of Tunnel shafts I Steel Identification Marks on Do. J. H. H. 1908 Material of Screw shafts I Steel Identification Marks on Do. J. H. H. 1908 Material of Steam Pipes W Iron + Copper Test pressure W Iron 540. Copper 360.

General Remarks (State quality of workmanship, opinions as to class, &c.) The material & workmanship is good. The Mach^y has been built under special survey & is eligible in my opinion for classification & the record + I.M.C. 6-08.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 6.08. ELEC. LIGHT. F.D. No. 4-7-08.

J.H.H. 6-7-08

The amount of Entry Fee £ 3 : 0 : Special £ 44 : 12 : Donkey Boiler Fee £ : : Travelling Expenses (if any) £ : : When applied for, - 3 JUL 1908 When received, 8-7-08

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

Committee's Minute Assigned + I.M.C. 6.08 F.D. Elec. Light



Write "Sheer Strake" opposite its corresponding letter. DOUBTLESS an thick POOR BRID FORE maint Plate LOWER Bowsp Topmar Riggii Sails. EQU. Number Certificate 32861 32862 32863 10.54 10.54 Number Certificate 370 Iron Six Obsolete Steel Boats Pumps Windla Engine What at Coal H Number Ceiling Cargo State siz Number Bulwa The abo Builder

Date of writt No. in Reg. Book. 63 Master Engines m Cum? Boiler Registered MULTY (Letter for Boilers No. of Cen safety valv Are they fi Smallest d Material of Descrip. of Top of pl rules 18 boiler Lu Description plates: M Top 8 x Smallest p Pitch of s Area supp Lower bac Pitch of t water spac rder at Working p eparately oles Working p Dates of Survey while building GENEI The the in Surve Trave Comm Assign