

to Hull.

Mean R. Stephenson & Co 374 Brilen. Gole S. S. 98. Shell Eng. Co Engine 116

Rpt. 4.

REPORT ON MACHINERY.

No. 53033
Hull - 1907

Port of Newcastle-on-Tyne

Received at London Office SAT. 15 JUN 1907

No. in Survey held at Newcastle Date, first Survey Feb. 25 Last Survey 31 May 1907
Reg. Book. 42 on the Shel Se K. "Orphesia" (Number of Visits 24)
Master Goole Built at Goole By whom built Goole S. B. & Rep. Co. Ld Tons { Gross 273
Net 98
Engines made at North Shields By whom made Shel Eng & D. D. Co. when made 1907
Boilers made at Newcastle By whom made R. Stephenson & Co. Ld when made 1907
Registered Horse Power 85.18 Owners Shurella Steam Fishing Co. Ld Port belonging to Lichwood
Nom. Horse Power as per Section 28 85.18 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 13" 22" 36" Length of Stroke 26" Revs. per minute 110 Dia. of Screw shaft 7.75" Material of screw shaft W. Iron
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 3' 0"
Dia. of Tunnel shaft 7.07" Dia. of Crank shaft journals 7.75" Dia. of Crank pin 4 1/2" Size of Crank webs 11 x 4 3/8" Dia. of thrust shaft under
collars 7 1/2" Dia. of screw 9' 9" Pitch of Screw 10' 3" mean No. of Blades 4 State whether moveable no Total surface 30 3/4 sq ft
No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes
No. of Donkey Engines 1 Sizes of Pumps Duplex 5 1/4 x 3 1/2 x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2 of 2" dia In Holds, &c. 1 of 2" to change box in stokehold leading to 3 of 2" dia to flush wells
No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump cp. 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 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 hold suction through steam exhaust How are they protected hold wood casing
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 21. 23. 24. May 07 of Stern Tube 24 May 07 Screw shaft and Propeller 24 May 07
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Son
Total Heating Surface of Boilers 1516 sq ft Is Forced Draft fitted no No. and Description of Boilers The Cyl. Mult. S. Ended
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 15-5-07 No. of Certificate 7484
Can each boiler be worked separately yes Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to
each boiler two direct Spring Area of each valve 4.9 sq in 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 10" Mean dia. of boilers 13-0" Length 10-6" Material of shell plates S
Thickness 1 3/32 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d lap
long. seams d strap Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates on width of butt straps 16 3/8"
Per centages of strength of longitudinal joint rivets 90 Working pressure of shell by rules 186 Size of manhole in shell 16 x 12
plate 85 Size of compensating ring 7 x 1 3/32 No. and Description of Furnaces in each boiler 3 Plain Material S Outside diameter 39
Length of plain part 73 Thickness of plates 3/4 Description of longitudinal joint d strap No. of strengthening rings half
bottom 69 Working pressure of furnace by the rules 194 Combustion chamber plates: Material S Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 15/16
Pitch of stays to ditto: Sides 9 3/4 x 8 Back 8 3/4 x 8 3/4 Top 9 3/4 x 8 If stays are fitted with nuts or riveted heads nut Working pressure by rules 187
Material of stays S Diameter at smallest part 1-73 Area supported by each stay 78.5 Working pressure by rules 181 End plates in steam space:
Material S Thickness 1 3/32 Pitch of stays 16 x 18 1/4 How are stays secured d x w Working pressure by rules 194 Material of stays S
Diameter at smallest part 5-56 Area supported by each stay 292 Working pressure by rules 190 Material of Front plates at bottom S
Thickness 1 Material of Lower back plate S Thickness 15/16 Greatest pitch of stays as per plan Working pressure of plate by rules 180
Diameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 3/4 Material of tube plates S Thickness: Front 1 Back 13/16 Mean pitch of stays 10 1/16
Pitch across wide water spaces 14 Working pressures by rules 182 Girders to Chamber tops: Material S Depth and
thickness of girder at centre 9 x 15/8 Length as per rule 32 1/2 Distance apart 8 Number and pitch of stays in each 2-9 3/4
Working pressure by rules 219 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked
separately yes 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 —

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?

L700-418M

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description None fitted
 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
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint
 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:— two top end bolts & nuts, two bottom end bolts & nuts, Spare
coupling bolts & nuts, two bed plate bolts & nuts, assorted iron bolts & nuts, Spare feed
& relief pump valves & seats, Spare air pump valves, Spare propeller

The foregoing is a correct description,
 For THE SHIELDS ENGINEERING & DRY DOCK CO., LIMITED.
Alex Melrose Manufacturer.

For ROBERT STEPHENSON & CO., LIMITED
W. H. Thompson SECRETARY.

Dates of Survey while building { During progress of work in shops - 1907 May 6, 15, 21, 22, 23, 24, 25, 29, 31, 31.
 { During erection on board vessel - 1907 Feb 23, Mar 4, 11, 15, 19, 26, Apr 11, 13, 19, 26, May 9, 13, 15.
 Total No. of visits 24 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 15.5.07 Slides 15.5.07 Covers 15.5.07 Pistons 15.5.07 Rods 15.5.07
 Connecting rods 15.5.07 Crank shaft 15.5.07 Thrust shaft 15.5.07 Tunnel shafts 15.5.07 Screw shaft 15.5.07 Propeller 23.5.07
 Stern tube 24.5.07 Steam pipes tested 29.5.07 Engine and boiler seatings 28.5.07 Engines holding down bolts 28.5.07
 Completion of pumping arrangements 31.5.07 Boilers fixed 28.5.07 Engines tried under steam 31.5.07
 Main boiler safety valves adjusted 31.5.07 Thickness of adjusting washers P 13/32 S 7/16
 Material of Crank shaft cast steel Identification Mark on Do. 1853 A.T.C. Material of Thrust shaft cast iron Identification Mark on Do. 1853 A.T.C.
 Material of Tunnel shafts cast iron Identification Marks on Do. 1853 A.T.C. Material of Screw shafts cast iron Identification Marks on Do. 1853 A.T.C.
 Material of Steam Pipes Copper Test pressure 360 lb

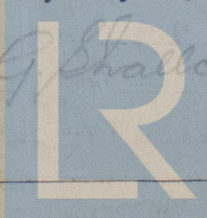
General Remarks (State quality of workmanship, opinions as to class, &c.)
The material & workmanship is good.
The Machinery has been built under special Survey & is eligible
in our opinion for classification & the record. + I.M.C. 5-07

It is submitted that
 this vessel is eligible for
 THE RECORD. + I.M.C. 5-07
J.R.R.
15/6/07
15.6.07

The amount of Entry Fee. £ 1 : 0 : 0 When applied for, 6 JUN 1907
 Special 12 : 15 : 0
 Donkey Boiler Fee £ 0 : 0 : 0 When received, 1876/07
 Travelling Expenses (if any) £ 0 : 0 : 0

Committee's Minute
Assigned

Leonard & Shallocross
H. Heck
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 1005. 18 JUN 1907
 + L.M.C. 5-07
 MACHINERY CERTIFICATE
 WRITTEN



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 Lloyd's Register
 Foundation

Certificate (if required) to be sent to the Registrar of Shipping.