

REPORT ON MACHINERY.

Port of Newcastle-on-Tyne

Received at London Office TUES. 5 SEP 1905

No. in Survey held at No. Shields Newcastle

Date, first Survey Mar 14

Last Survey 12 Sept 1905

Reg. Book.

(Number of Visits 15)

on the steel of Lochside

Tons Gross 242. Net 105

Master G. Croaggs Built at North Shields By whom built Smith Dock Coy Ltd

When built 1905

Engines made at North Shields By whom made Shields Engineering Coy Ltd

when made 1905

Boilers made at Newcastle By whom made R. Stephenson & Co Ltd

when made 1905

Registered Horse Power _____ Owners Jas Deuchar

Port belonging to Newcastle

Nom. Horse Power as per Section 28 59 Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound

No. of Cylinders two No. of Cranks two

Dia. of Cylinders 16" - 34" Length of Stroke 22 Revs. per minute 100 Dia. of Screw shaft as per rule 6.25 Material of screw shaft cast 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 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 2' 9"

Dia. of Tunnel shaft as per rule 6.4 Dia. of Crank shaft journals as per rule 6.25 Dia. of Crank pin 6 7/8 Size of Crank webs 4 1/2 x 12 1/2 Dia. of thrust shaft under

collars 6 7/8 Dia. of screw 8' 3 Pitch of screw 11' 6" No. of blades 4 State whether moveable no Total surface 23 sq ft

No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 12" Can one be overhauled while the other is at work yes

No. of Bilge pumps 1 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 5 1/4 x 3 1/2 x 5" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one 9 1/2" aft - 19 1/2" forward In Holds, &c. one 2 1/2"

No. of bilge injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump CP Is a separate donkey suction fitted in Engine room & size 4 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

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 yes

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 Newcastle Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes worked from yes

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1002 sq ft Is forced draft fitted no

No. and Description of Boilers one Cylindrical Multitubular Working Pressure 130 lb Tested by hydraulic pressure to 260 lb

Date of test 22.5.05 Can each boiler be worked separately yes Area of fire grate in each boiler 35 sq ft No. and Description of safety valves to

each boiler two direct Spring Area of each valve 4.91 sq in Pressure to which they are adjusted 135 lb Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 10'-6" Length 10.7 1/4 Material of shell plates Steel

Thickness 3/4 Range of tensile strength 32 Are they welded or flanged no Descrip. of riveting: cir. seams D. Lap long. seams D. Strap

Diameter of rivet holes in long. seams 15/16 Pitch of rivets 5" Lap of plates or width of butt straps 14 1/4

Per centages of strength of longitudinal joint rivets 82.25% Working pressure of shell by rules 140 lb Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 3/4" No. and Description of Furnaces in each boiler two plain Material Steel Outside diameter 39"

Length of plain part top 49 3/4" Thickness of plates bottom 7/8" Description of longitudinal joint D. Strap No. of strengthening rings half

Working pressure of furnace by the rules 135 lb Combustion chamber plates: Material Steel Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 3/4

Pitch of stays to ditto: Sides 9 x 9" Back 9 x 9" Top 9 x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 135 lb

Material of stays Steel Diameter at smallest part 1.5" Area supported by each stay 81 sq in Working pressure by rules 136 lb End plates in steam space:

Material Steel Thickness 7/8" Pitch of stays 17 1/2 x 15" How are stays secured D. nuts Working pressure by rules 136 lb Material of stays Steel

Diameter at smallest part 3.67 Area supported by each stay 262.5 Working pressure by rules 139 lb Material of Front plates at bottom Steel

Thickness 7/8 Material of Lower back plate Steel Thickness 7/8 Greatest pitch of stays as per plan Working pressure of plate by rules 130

Diameter of tubes 3/4" Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 7/8" Back 23/32" Mean pitch of stays 11 1/4"

Pitch across wide water spaces 14" Working pressures by rules 140 lb Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 x 27 1/16 Length as per rule 30 1/2 Distance apart 9" Number and pitch of Stays in each two 9" pitch

Working pressure by rules 147 lb Superheater or Steam chest; how connected to boiler D. rivets Can the superheater be shut off and the boiler worked

separately no Diameter 2'-0" Length 2'-6" Thickness of shell plates 7/16 Material Steel Description of longitudinal joint S. Lap Diam. of rivet

holes 15/16 Pitch of rivets 2 1/4" Working pressure of shell by rules 217 lb Diameter of flue yes Material of flue plates skid Thickness 11/16

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 130 lb Area of safety valves to superheater yes Are they fitted with easing gear yes

DONKEY BOILER— No. Description *None fitted*

Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
No. of safety valves Area of each Pressure to which they are adjusted 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 Rivets Plates Thickness of shell crown plates Radius of do. No. of Stays to do.
Dia. of stay Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
Thickness of furnace crown plates Stayed by Working pressure of shell by rules
Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— *Two top end bolts and nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, Spare Coupling bolts & nuts, Spare feed & Relief pump Valves, assorted iron bolts & nuts, one Spare Propeller.*

The foregoing is a correct description, of Engines



Manufacturer.

For ROBERT STEPHENSON & CO., LIMITED. (Boiler Manufacturers)

W.B. Taylor

SHIPYARD MANAGER

Dates of Survey while building
During progress of work in shops
During erection on board vessel
Total No. of visits *15*
1905. Mch. 14. 24. Apr. 2. 18. May 16. 22. June 8. 14. 26. July 5. 20. 27. 28. Aug. 26. Sep. 1.

Is the approved plan of main boiler forwarded herewith *yes*

“ “ “ donkey “ “ “

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

*The material & workmanship is good.
The Mach: is a duplicate of that fitted in the S.S. "Portsea". New Rep: No 47631
The Mach: has been built under special survey & is eligible in our opinion for classification & the record *L.M.C. 9.05**

It is submitted that this vessel is eligible for THE RECORD *L.M.C. 9.05*

5.9.05
5.9.05

Removable - on - Type

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee... £ *1* : : : When applied for, *4 SEP 1905*
Special ... £ *8* : *8* : :
Donkey Boiler Fee ... £ : : : When received, *6/10/05*
Travelling Expenses (if any) £ : : :
FRI, 8 SEP 1905

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

Committee's Minute
Assigned

+ L.M.C. 9.05

MACHINERY CERTIFICATE WRITTEN

