

REPORT ON MACHINERY.

No. 47856.

Port of Newcastle or Tyne

Received at London Office 10

No. in Survey held at North Shields & Hebburn

Date, first Survey July 7th

Last Survey 1st Nov 1904

Reg. Book.

on the Steel **S. S. TRENT**

(Number of Visits 26)

Master C. Tomlinson Built at N Shields

By whom built Smith Dock Coy Ltd

Tons { Gross 218
Net 64
When built 1904

Engines made at N Shields

By whom made Shields Engineering Coy Ltd (64) when made 1904

Boilers made at Newcastle

By whom made R^o Stephenson & Co when made 1904

Registered Horse Power

Owners Wye Steam Trawling Co Ltd Port belonging to Fleetwood

Nom. Horse Power as per Section 28 70 7/3

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 12 20 34 Length of Stroke 24 Revs. per minute 100 Dia. of Screw shaft 7 1/8 Material of screw shaft W.T

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 Painted Length of stern bush 2' 9 1/2

Dia. of Tunnel shaft 6 3/8 as per rule 6 3/4 as fitted 6 3/4 Dia. of Crank shaft journals 6 1/2 as per rule 6 3/4 as fitted 6 3/4 Dia. of Crank pin 6 3/4 Size of Crank webs 12 1/2 x 4 1/8 Dia. of thrust shaft under collars 6 3/4 Dia. of screw 9' 3" Pitch of screw 11' 3" No. of blades 4 State whether moveable No Total surface 30%

No. of Feed pumps 1 Diameter of ditto 2 3/8 Stroke 12" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 2 3/8 Stroke 12" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 4 1/2 x 2 3/4 x 4 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room two 2" dia & 2" diameter ball valves In Holds, &c. one of 2" dia to hold well

(Turbine driven centrifugal auxiliary circulating pump fitted to condenser discharge)

No. of bilge injections 1 sizes 3 Connected to condenser, or to circulating pump CP Is a separate donkey suction fitted in Engine room & size 4 1/2" 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 Cas How are they protected Ceiling boards

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 Nov 1904 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 1295 Is forced draft fitted No

No. and Description of Boilers One Cyl. Single End Working Pressure 180 Tested by hydraulic pressure to 360

Date of test 13-9-04 Can each boiler be worked separately Yes Area of fire grate in each boiler 37 No. and Description of safety valves to each boiler two direct Spring Area of each valve 3.97" Pressure to which they are adjusted 18 1/2 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2 1/2 Mean dia. of boilers 12.0 1/8 Length 10.0 Material of shell plates S

Thickness 1 1/16 Range of tensile strength 28/32 Are they welded or flanged No Descrip. of riveting: cir. seams d lap long. seams d strap

Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 7 1/4 Lap of plates or width of butt straps 16

Per centages of strength of longitudinal joint rivets 86 plate 85.3 Working pressure of shell by rules 192 Size of manhole in shell 16 x 12

Size of compensating ring 7 x 1 1/16 No. and Description of Furnaces in each boiler Two plain Material S Outside diameter 42 1/2

Length of plain part top 76 bottom 69 Thickness of plates crown 49/64 bottom 49/64 Description of longitudinal joint d strap No. of strengthening rings half

Working pressure of furnace by the rules 182 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 11/8 Top 5/8 Bottom 13/16

Pitch of stays to ditto: Sides 8 1/2 x 8 1/2 Back 9 x 9 3/4 Top 8 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nut Working pressure by rules 182

Material of stays S Diameter at smallest part 2-1 Area supported by each stay 87.75 Working pressure by rules 215 End plates in steam space: Material S Thickness 1 1/32 Pitch of stays 16 1/2 x 16 1/2 How are stays secured d 1/2 + W Working pressure by rules 185 Material of stays S

Diameter at smallest part 5-05 Area supported by each stay 272.25 Working pressure by rules 185 Material of Front plates at bottom S

Thickness 1 Material of Lower back plate S Thickness 7/8 Greatest pitch of stays per plan Working pressure of plate by rules 44' 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 11/16

Pitch across wide water spaces 14 Working pressures by rules 183 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 1/2 x 1 3/8 Length as per rule 27 1/2 Distance apart 8 1/2 Number and pitch of Stays in each 2- 8 1/2

Working pressure by rules 192 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

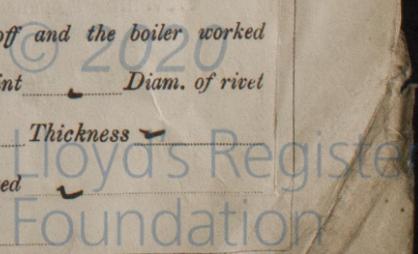
If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes

Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

W1212-0274

If not, state whether, and when, one will be sent

In a Report also sent on the Hull of the Ship



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 _____ 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 _____
 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:— *Spare Propeller. Two top end bolts and nuts, two bottom end bolts and nuts, two main bearing bolts and nuts, Spare connecting bolts and nuts, Spare Feed & Bilge pump Valves, assorted iron bolts and nuts.*

The foregoing is a correct description,
 W. H. Thompson. Manufacturer of Boilers



SECRETARY 1904. July 7 Aug. 4, 10, 13, 18, 25, 29, 30. Sep. 5, 8, 12, 13, 15, 19, 22, 26. Oct. 7, 11, 12, 14, 17, 19, 21, 27, 28.
 Dates of Survey while building: During progress of work in shops - - - - -
 During erection on board vessel - - - - -
 Total No. of visits 26.
 Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery built under Special Survey. The material and workmanship found good and efficient. In our opinion this vessel is worthy of the Record of R.M.C. 11.04 to be made in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. *R.M.C. 11.04.*

J.H.H.
 9.11.04
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Certificate (if required) to be sent to Newcastle-on-Tyne.

The amount of Entry Fee. £ 1 : : :
 Special £ 10 : 10 : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 8 NOV 1904
 When received, 24/11/04

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

Committee's Minute FRI. 11 NOV 1904
 Assigned + L.M.C. 11.04

