

REPORT ON MACHINERY.

33571

Port of Newcastle

WED. JUL 15 1896

No. in Survey held at Newcastle
Reg. Book.

Date, first Survey 5 June/95 Last Survey 3 July 1896

Received at London Office

on the Steel Screw Steamer Neptune

(Number of Visits.....)

Master J. Allen Built at Newcastle By whom built Messrs C.S. Smart Hunter (Ld) When built 1896

Tons { Gross 3866
Net 2178

Engines made at Newcastle By whom made North Eastern Marine Engineering Co (Ld) when made 1896

Boilers made at Newcastle By whom made North Eastern Marine Engineering Co (Ld) when made 1896

Registered Horse Power 280 Owners Venus Steam Shipping Co Ltd Port belonging to Newcastle

Horse Power as per Section 28 289

ENGINES, &c.— Description of Engines Triple Expansion Direct acting No. of Cylinders Three
Diameter of Cylinders 24-40-64 Length of Stroke 42 Revolutions per minute 65 Diameter of Screw shaft as per rule 11.36
Diameter of Tunnel shaft as fitted 11.5 Diameter of Crank shaft journals 12 Diameter of Crank pin 12 Size of Crank webs 21.3 x 8.5
Diameter of screw 14 ft Pitch of screw 16 ft. No. of blades four. State whether moveable no Total surface 85 ft
No. of Feed pumps Two Diameter of ditto 3.5 Stroke 24 Can one be overhauled while the other is at work yes
No. of Bilge pumps Two Diameter of ditto 3.5 Stroke 24 Can one be overhauled while the other is at work yes
No. of Donkey Engines Two Sizes of Pumps 9 x 12 Stroke No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room Two mugs 3.5 - 2 Dk mugs 3.5 di In Holds, &c. fore Hold Two 3.5 mugs; Main Hold Two 3.5 mugs, after Hold 3.5 Centre, Tunnel well 3.5 mugs.
No. of bilge injections 1 sizes 4 Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size yes
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 none
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 fore & Main Hold Bilges How are they protected wood casing.
Are all pipes, cocks, valves, and pumps in connection with 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 on ways. 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 4400 ft
No. and Description of Boilers Two Cylindrical Multitubular Horizontal Working Pressure 160 lb. Tested by hydraulic pressure to 320 lb.
Date of test 15/4/96 Can each boiler be worked separately yes Area of fire grate in each boiler 63 ft No. and Description of safety valves to
each boiler Two direct spring Area of each valve 4.04 ft Pressure to which they are adjusted 165 lb. Are they fitted
with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 18 Mean diameter of boilers 15-0.5
Length 10-6 Material of shell plates steel Thickness 1.5 Description of riveting: circum. seams Lap both the long. seams DBS. - OK.
Diameter of rivet holes in long. seams 1.5 Pitch of rivets 4.5 Lap of plates or width of butt straps straps 15.5
Percentage of strength of longitudinal joint 80.75 Working pressure of shell by rules 161 lb. Size of manhole in shell end 16 x 12
Size of compensating ring flange No. and Description of Furnaces in each boiler 4 plain Material steel Outside diameter 36
Length of plain part top 6-3 bottom 5-9 Thickness of plates top 1.5 bottom 1.5 Description of longitudinal joint DBS - OK No. of strengthening rings one
Working pressure of furnace by the rules 168 lb. Combustion chamber plates: Material steel Thickness: Sides 1.5 Back 1.5 Top 1.5 Bottom 1.5
Pitch of stays to ditto: Sides 10 x 10 Back 9.5 x 7.5 Top 10 x 10 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 162 lb.
Material of stays steel Diameter at smallest part 1.5 Area supported by each stay 100 ft Working pressure by rules 161 lb. End plates in steam space:
Material steel Thickness 1.5 Pitch of stays 22 x 21.5 How are stays secured DN + W Working pressure by rules 160.6 lb. Material of stays steel
Diameter at smallest part 3.28 Area supported by each stay 470 ft Working pressure by rules 161.5 lb. Material of Front plates at bottom steel
Thickness 3.5 Material of Lower back plate steel Thickness 3.5 Greatest pitch of stays 14.5 Working pressure of plate by rules 164 lb.
Diameter of tubes 3.5 Pitch of tubes 4.5 x 4.5 Material of tube plates steel Thickness: Front 3.5 Back 3.5 Mean pitch of stays 11.5
Pitch across wide water spaces 14.5 Working pressures by rules 170 lb. Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 9 x 1.5 Length as per rule 30.5 Distance apart 10 Number and pitch of Stays in each Two 10
Working pressure by rules 192 lb. 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

DONKEY BOILER— Description *Vertical with four cross tubes.*
 Made at *Stockton* By whom made *Riley Bros.* When made *1895* Where fixed *Stockton*
 Working pressure *80 lb.* tested by hydraulic pressure to *160 lb.* No. of Certificate *1049* Fire grate area *26 sq ft* Description of safety valves *Direct spring*
 No. of safety valves *Two* Area of each *4.91* Pressure to which they are adjusted *80 lb.* If fitted with easing gear *yes* If steam from main boilers enter the donkey boiler *No* Diameter of donkey boiler *4-0* Length *15-0* Material of shell plates *steel* Thickness *7/16*
 Description of riveting long. seams *Lap Double* Diameter of rivet holes *7/8* Whether punched or drilled *punched* Pitch of rivets *3/8*
 Lap of plating *4 1/4* Per centage of strength of joint Rivets *44%* Thickness of shell crown plates *9/16* Radius of do. *5 ft* No. of Stays to do. *same*
 Dia. of stays *1 1/2* eff. Diameter of furnace Top *15-5* Bottom *6-0 1/2* Length of furnace *5-8* Thickness of furnace plates *5/8* Description joint *Lap angle* Thickness of furnace crown plates *9/16* Stayed by *same as shell crown* Working pressure of shell by rules *80*
 Working pressure of furnace by rules *80 lb.* Diameter of uptake *14* Thickness of uptake plates *7/16* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *One new propeller, 2 each top end, bottom end*
main driving bolts & nuts, one set, coupling bolt, 1 set each feed & bilge
pump valves, assorted bolts nuts from & from. &c.

The foregoing is a correct description,
 FOR AND ON BEHALF OF THE NORTH EASTERN
 MARINE ENGINEERING COMPANY, LIMITED. *L. M. C. 7.96*

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

1895- June 1-1931 July 28 16 18 24 25 Aug 3 15 21 Sep 4 18 26 Oct 3 9 10 15 21 24 30 Nov 6 12 19
Dec 3 10 20-1896- Jan 10 16 Feb 14 21 Mar 9 13 21 Apr 3 24 May 6 8 14 18 21 June 4 11 20
 Dates of survey while building During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits *46*

The Engineer Boilers of this vessel have been constructed under special survey the Material & Workmanship sound & good, the Boilers & Steam pipes were tested by hydraulic pressure in under steam to the working pressure the whole of the machinery worked satisfactorily, rendering this vessel eligible in my opinion to have the notation ** LMC 7.96* in the Register Book.

It is submitted that
 this vessel is eligible for
THE RECORD *L.M.C. 7.96*
Emil
15.7.96.

Certificate (if required) to be sent to *Newcastle on Tyne*

The amount of Entry Fee.. £ *2 : 0 :* When applied for,
 Special £ *34 : 9 :* *14.7.96*
 Donkey Boiler Fee £ : : When received,
 Travelling Expenses (if any) £ : : *22.7.96*

Committee's Minute *FRI. JUL 17 1896*
 Assigned *+ L.M.C. 7.96*

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