

REPORT ON MACHINERY.

No. 23457

Port of Glasgow.

Received at London Office JULY 23 JAN 1906

No. in Survey held at Glasgow.
Reg. Book.

Date, first Survey 7th Sept 05 Last Survey 16th Jan 1906

on the S.S. "SEA NYMPH."

(Number of Visits)

Master Greenock Built at Greenock By whom built G. Brown & Co.

Tons }
Gross }
Net }
When built 1906.

Engines made at Glasgow. By whom made Colin Houston & Co. when made 1906.

Boilers made at Glasgow By whom made Meyer Young & Lawson (No 707) when made 1905

Registered Horse Power 47 Owners Kings Lynn. Port belonging to Kings Lynn.

Nom. Horse Power as per Section 28 47 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Compound, - Screw.

No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 14 1/2" & 30" Length of Stroke 21 Revs. per minute 120 Dia. of Screw shaft 6 1/4" Material of screw shaft 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 ✓ 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 ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2" 2"

Dia. of Tunnel shaft 5.97 as per rule 5.97 as fitted none Dia. of Crank shaft journals 6.27 as per rule 6.27 as fitted 6 1/2" Dia. of Crank pin 6 1/2" Size of Crank webs 14 1/4" Dia. of thrust shaft under collars 6 1/2" Dia. of screw 7 1/2" Pitch of screw 9 1/2" No. of blades 4 State whether moveable no Total surface 21 sq. ft.

No. of Feed pumps 1 Diameter of ditto 2 1/4" Stroke 10 1/2" Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2 1/4" Stroke 10 1/2" Can one be overhauled while the other is at work ✓

No. of Donkey Engines 2 Sizes of Pumps { 5 x 3 1/2 x 6 duplex }
{ 3 x 2 x 4 single } No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" dia. ✓ In Holds, &c. One 2" dia. ✓

No. of bilge injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump no 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 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 none How are they protected ✓

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 before launch Is the screw shaft tunnel watertight none

Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—No. of Certificate 7846 (Letter for record (S)) Total Heating Surface of Boilers 844.7 Is forced draft fitted No.

No. and Description of Boilers One single ended Working Pressure 130 lb Tested by hydraulic pressure to 260 lb

Date of test 7.12.05 Can each boiler be worked separately ✓ Area of fire grate in each boiler 36 No. and Description of safety valves to each boiler 2 patent spring Area of each valve 4.9 Pressure to which they are adjusted 135 lbs Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 10' 6" Length 10' 0" Material of shell plates Steel

Thickness 11/16" Range of tensile strength 29.6-32 Are they welded or flanged No. Descrip. of riveting: cir. seams double riv. long. seams double straps

Diameter of rivet holes in long. seams 13/16" Pitch of rivets 5" Lap of plates or width of butt straps 11 3/4"

Per centages of strength of longitudinal joint rivets 124 Working pressure of shell by rules 130 lb Size of manhole in shell 16" x 12"

Size of compensating ring 6" x 11/16" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 41"

Length of plain part top 7' 0" bottom 7' 0" Thickness of plates crown 11/16" bottom 11/16" Description of longitudinal joint Welded No. of strengthening rings Angle at back thin

Working pressure of furnace by the rules 145 Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 35/64" Top 1/2" Bottom 1/2"

Pitch of stays to ditto: Sides 8 x 7 Back 8 1/2 x 8 1/2 Top 7 x 7 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 137

Material of stays Steel Diameter at smallest part 1.24 Area supported by each stay 70 1/8 Working pressure by rules 147 End plates in steam space:

Material Steel Thickness 25/32 Pitch of stays 14" x 14" How are stays secured Nuts Working pressure by rules 139 lb Material of stays Steel

Diameter at smallest part 2.5 Area supported by each stay 14" x 14" Working pressure by rules 130 lb Material of Front plates at bottom Steel

Thickness 11/16" Material of Lower back plate Steel Thickness 9/16" Greatest pitch of stays 14" x 8 1/4" Working pressure of plate by rules 156 lb

Diameter of tubes 3 1/2" Pitch of tubes 5 1/4" x 4 3/4" Material of tube plates Steel Thickness: Front 11/16" Back 11/16" Mean pitch of stays 10"

Pitch across wide water spaces 14" Working pressures by rules 160 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 14" x 6" x 11/16" Length as per rule 25 3/4" Distance apart 7" Number and pitch of Stays in each Two at 7"

Working pressure by rules 146 lb Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately ✓ 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 ✓

DONKEY BOILER— No. *One* Description *Ordinary vertical two cross tubes in furnace.*
 Made at *Glasgow* By whom made *Meyer, Irving & Lawson (No 716)* Date of test *20.12.05* Where fixed *In stockhold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *7991* Fire grate area *11 1/2 sq ft* Description of safety valves *patent spring*
 No. of safety valves *One* Area of each *4.9 sq ft* Pressure to which they are adjusted *85 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *4' 5 1/4"* Length *8' 10 1/2"* Material of shell plates *Steel* Thickness *3/8"* Range of tensile strength *27,632 lbs* Descrip. of riveting long. seams *double riv. lap.* Dia. of rivet holes *13/16"* Whether punched or drilled *Drilled* Pitch of rivets *2 5/8"*
 Lap of plating *3 7/8"* Per centage of strength of joint Rivets *89.8* Thickness of shell crown plates *1/2"* Radius of do. *4' 6"* No. of Stays to do. *No stays*
 Dia. of stays. *✓* Diameter of furnace Top *42 7/8"* Bottom *48"* Length of furnace *48"* Thickness of furnace plates *7/16"* Description of joint *Welded* Thickness of furnace crown plates *17/32"* Stayed by *Uptake only* Working pressure of shell by rules *101 lbs*
 Working pressure of furnace by rules *93 lbs* Diameter of uptake *10"* Thickness of uptake plates *7/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Two top end, & two bottom end connecting rod bolts, two main bearing bolts, one set of coupling bolts, and one set of feed & bilge pump valves, etc.*

The foregoing is a correct description,
Colin Houston & Co Manufacturer.

Dates of Survey while building
 During progress of work in shops— *1905: Sept 7, 27, Oct 5, 11, 18, 24, 27, 29, Nov 10, 15, 17, 21, 30, Dec 6, 7, 12, 19, 22, 26, 28*
 During erection on board vessel— *1906: Jan 16*
 Total No. of visits *20*

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under special survey, the materials and workmanship are of good quality, it has been securely fitted on board tried under steam & found to be satisfactory. In my opinion, it is eligible to be classed in the Register Book with the record of L.M.C. 1.06.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 1.06.

W.L. 23.1.06
P.M.L. 23.1.06

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, *22 JAN 1906*
 Special £ *8* : :
 Donkey Boiler Fee £ : : When received, *5.2.06*
 Travelling Expenses (if any) £ : : *3.2.06*
 Glasgow 22 JAN 1906

Arthur L. Jones & J. W. Dimmock.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned *L.M.C. 1.06*

