

REPORT ON MACHINERY.

No. 6990

Received at London Office MONDAY 8 JUNE 1885

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

Date, first Survey *24th Novr 1884* Last Survey *5th June 1885.*

on the *Screw Steam Yacht "Nerissa".*

(Number of Vials *23*) *264-26*
Tons *143-82*

Master *A. M. Cullin* Built at *Glasgow* By whom built *A. Stephen & Sons* When built *1884-5*

Engines made at *Glasgow* By whom made *do.* when made *do.*

Boilers made at *do.* By whom made *do.* when made *do.*

Registered Horse Power *120.* Owners *Alexander Stephen* Port belonging to *Glasgow.*

ENGINES, &c.—

Description of Engines *Triple Expansion Engines.*

Diameter of Cylinders *13, 21 & 35"* Length of Stroke *30"* No. of Rev. per minute *95* Point of Cut off, High Pressure *Var* Low Pressure *—*

Diameter of Screw shaft *8½"* Diam. of Tunnel shaft *8"* Diam. of Crank shaft journals *8½"* Diam. of Crank pin *9"* size of Crank webs *4½" x 10"*

Diameter of screw *9'-0"* Pitch of screw *13'-0"* No. of blades *4* state whether moveable *Set* total surface *34 sq. ft.*

No. of Feed pumps *2.* diameter of ditto *2¾"* Stroke *20"* Can one be overhauled while the other is at work *yes.*

No. of Bilge pumps *2.* diameter of ditto *3½"* Stroke *20"* Can one be overhauled while the other is at work *yes.*

Where do they pump from *All compartments &c.*

No. of Donkey Engines *One* Size of Pumps *7" x 7" x 3½"* Where do they pump from *Notre Sea & bilges.*

Are all the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*

No. of bilge injections *One* and sizes *4"* Are they connected to condenser, or to circulating pump *—*

How are the pumps worked *by levers.*

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 accessible at all times *yes*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *in stocks before launching*

Is the screw shaft tunnel watertight *None* and fitted with a sluice door *—* worked from *—*

BOILERS, &c.—

Number of Boilers *One* Description *Multitubular.* Whether Steel or Iron *Steel.*

Working Pressure *160 lbs.* Tested by hydraulic pressure to *320 lbs.* Date of test *24th April 1885.*

Description of superheating apparatus or steam chest *Horizontal steam dome*

Can each boiler be worked separately *—* Can the superheater be shut off and the boiler worked separately *—*

No. of square feet of fire grate surface in each boiler *49½"* Description of safety valves *Direct spring* No. to each boiler *2.*

Area of each valve *7"* Are they fitted with easing gear *yes* No. of safety valves to superheater *—* area of each valve *—*

Are they fitted with easing gear *—* Smallest distance between boilers and bunkers *or woodwork 7"* Diameter of boilers *13'-0"*

Length of boilers *10'-0"* description of riveting of shell long. seams *trib riv. d. butt* circum. seams *d. riv. lap* Thickness of shell plates *1 3/16*

Diameter of rivet holes *1¼"* whether punched or drilled *drilled* pitch of rivets *3 9/16 & 7 1/8"* Lap of plating *23 3/4" butts.*

Per centage of strength of longitudinal joint *82* working pressure of shell by rules *161 lbs.* size of manholes in shell *11" x 15".*

Size of compensating rings *7/8" plate 5" broad.* No. of Furnaces in each boiler *3.*

Outside diameter *39"* length, top *7'-0"* bottom *9'-3½"* thickness of plates *1/2* description of joint *Corrugated* if rings are fitted *—*

Greatest length between rings *—* working pressure of furnace by the rules *155* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *9/16"*

Pitch of stays to ditto, sides *7" x 7"* back *7" x 7"* top *7" x 7"* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *157 lbs.*

Diameter of stays at smallest part *1½" & 1½"* working pressure of ditto by rules *195.* end plates in steam space, thickness *1"*

Pitch of stays to ditto *14½" x 15½"* how stays are secured *d. nuts* working pressure by rules *222 lbs.* diameter of stays at smallest part *3" screw steel* working pressure by rules *160 lbs.*

Front plates at bottom, thickness *7/8"* Back plates, thickness *1"*

Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3½"* pitch of tubes *4 3/4" & 4 5/8"* thickness of tube plates, front *1"* back *7/8"*

how stayed *d. tubes* pitch of stays *9 1/2" & 9 1/2"* width of water spaces *7"*

Diameter of Superheater or Steam chest *36"* length *8ft* thickness of plates *7/16* description of longitudinal joint *d. riv. lap* diam. of rivet holes *7/8"*

Pitch of rivets *3½"* working pressure of shell by rules *160 lbs.* diameter of flue *—* thickness of plates *—* If stiffened with rings *—*

Distance between rings *—* working pressure by rules *—* end plates of superheater, or steam chest; thickness *1/2"* how stayed *dished*

with *One 3" rod stay through centre* Superheater or steam chest; how connected to boiler *d. riv. welded throat.*

6990. yes.

DONKEY BOILER— Description None

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 _____ if fitted with easing gear _____ if steam from main boilers can enter the donkey boiler _____ diameter of donkey boiler _____ length _____ description of riveting _____

Thickness of shell plates _____ diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ lap of plating _____

per centage of strength of joint _____ thickness of crown plates _____ stayed by _____

Diameter of furnace, top _____ bottom _____ length of furnace _____ thickness of 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 plates _____ thickness of water tubes _____

SPARE GEAR. State the articles supplied:— Top and bottom end bolts. Main bearing bolts. Coupling bolts. Feed and bilge pump valves. Bolts & nuts assorted

The foregoing is a correct description,
Ally Stephen & sons Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. The above mentioned
Engines and Boiler are now completed onboard in a satisfactory
manner and the machinery is now in my opinion in a good
and efficient working condition and eligible to be noted in the
Society's Registered Book: **L.M.C. 6.85.**

The Shafting has been examined by me while being rough
turned and finished and is as far as can be seen sound
and good.

It is submitted that the vessel is eligible to be in the classification of 2nd class and is recorded.

58/185

The amount of Entry Fee .. £ 2 : - : - received by me,
Special .. £ 18 : - : -
Donkey Boiler Fee .. £ - : - : -
Certificate (if required) .. £ - : - : - 4/6/1885
To be sent as per margin.
(Travelling Expenses, if any, £ - 8/-)

Committee's Minute TUESDAY 9 JUNE 1885
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John Sander son
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Glasgow.

