

REPORT ON MACHINERY.

10169

Port of Greenock

Received at London Office

TUES 3 MARCH

Survey held at Greenock & Port Glasgow Date, first Survey 29th August 1890 Last Survey 28th February 1891

(Number of Visits 92)

1230.36

On the Twin S.S. "Nebula" (late P.S. "Baron O'By") Tons 760.96

Converted 1891

When built 1875

H. Thompson Built at Newcastle By whom built C. Mitchell & Co.

when made 1891

made at Greenock By whom made Wincaid & Co. (Lim^d)

when made 1891

made at Glasgow By whom made H. Wallace & Co.

rated Horse Power 130 Owners Companhia de Navegacao Luso-Brasileira Port belonging to Rio de Janeiro

128

NES, &c.—

tion of Engines Compound Inverted Direct Acting Triple Expansion

or of Cylinders Two 13" Two 20" Two 30" Length of Stroke 24" No. of Rev. per minute 150 Point of Cut off, High Pressure 1 1/2 Low Pressure 1 1/2

or of Screw shafts 6 1/8" Diam. of Tunnel shafts 6 1/2" Diam. of Crank shaft journals 7" Diam. of Crank pin 7" size of Crank webs 12 x 5"

or of screws 8 x 6" Pitch of screws 12 x 0" No. of blades 4 state whether moveable no total surface 25 sq. ft. in each

Feed pumps Two diameter of ditto 3 1/4" Stroke 13" Can one be overhauled while the other is at work yes

Bilge pumps Two diameter of ditto 3 1/4" Stroke 13" Can one be overhauled while the other is at work yes

do they pump from Engine room. Cargo Holds & after end of tunnels

Donkey Engines One duplex Size of Pumps 3 1/2 x 5 1/2 Where do they pump from Sea. Hot wells & Bilges

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

bilge injections Two and sizes 3" Are they connected to condenser, or to circulating pump Circulating pumps

re the pumps worked By levers

connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

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 awash

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

pipes are carried through the bunkers Bilge pipes How are they protected Wood casing

l pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes

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

were stern tubes, propellers, screw shafts, and all connections examined in dry dock 15th January 1891

screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Engine room platforms

ERS, &c.—

or of Boilers One Description See Glasgow Surveyor's Report Whether Steel or Iron

g Pressure 160 lbs Tested by hydraulic pressure to

Date of test

tion of superheating apparatus or steam chest

ch boiler be worked separately Can the superheater be shut off and the boiler worked separately

Reating surface 2106 square feet Description of safety valves Direct spring No. to each boiler Two

square feet of fire grate surface in each boiler

f each valve 9.624" Are they fitted with easing gear

No. of safety valves to superheater

area of each valve

y fitted with easing gear

Smallest distance between boilers and bunkers or woodwork

Diameter of boilers

of boilers

description of riveting of shell long. seams

circum. seams

Thickness of shell plates

er of rivet holes

whether punched or drilled

pitch of rivets

Lap of plating

tage of strength of longitudinal joint

working pressure of shell by rules

size of manholes in shell

compensating rings

No. of Furnaces in each boiler

diameter

length, top

bottom

thickness of plates

description of joint

if rings are fitted

t length between rings

working pressure of furnace by the rules

combustion chamber plating, thickness, sides

back

top

f stays to ditto, sides

back

top

If stays are fitted with nuts or riveted heads

working pressure of plating by

s

Diameter of stays at smallest part

working pressure of ditto by rules

end plates in steam space, thickness

f stays to ditto

how stays are secured

working pressure by rules

diameter of stays at

llest part

working pressure by rules

Front plates at bottom, thickness

Back plates, thickness

t pitch of stays

working pressure by rules

Diameter of tubes

pitch of tubes

thickness of tube

es, front

back

how stayed

pitch of stays

width of water spaces

er of Superheater or Steam chest

length

thickness of plates

description of longitudinal joint

diam. of rivet holes

f rivets

working pressure of shell by rules

diameter of flue

thickness of plates

If stiffened with rings

re between rings

working pressure by rules

end plates of superheater, or steam chest; thickness

how stayed

Superheater or steam chest; how connected to boiler

GRK316-0161

DONKEY BOILER—

Description *Round upright old boiler* *see Secretary's letter of 5th November 1890.*

Made at *not ascertained* by whom made *not ascertained* when made *—* where fixed *Stobohale recess.*
 Working pressure *56 lbs* tested by hydraulic pressure to *112 lbs* No. of Certificate *—* fire grate area *16 square feet.* description of safety
 valves *Direct spring* No. of safety valves *one* area of each *9.62 sq* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *5' 5"* length *10' 11"* description of riveting *Lap double & single*
 Thickness of shell plates *3/8 & 7/16* diameter of rivet holes *3/4* whether punched or drilled *—* pitch of rivets *2"* lap of plating *4" & 2 1/2"*
 per centage of strength of joint *62.5* thickness of crown plates *7/16* stayed by *Four 2 bar stays & three 7/8" thick gusset plates.*
 Diameter of furnace, top *4' 2"* bottom *4' 8 1/2"* length of furnace *5' 5"* thickness of plates *7/16* description of joint *Lap single riveted.*
 Thickness of furnace crown plates *7/16* stayed by *3 bar stays as* working pressure of shell by rules *56.1*
 Working pressure of furnace by rules *56 lbs* diameter of uptake *14 1/4 to 16* thickness of plates *1/2* thickness of water tubes *7/16*

SPARE GEAR. State the articles supplied:— *4 Propellers. 1 screw shaft. 2 top end bolts & nuts.*
2 bottom end bolts & nuts. 2 main bearing bolts. 1 set coupling bolts. piston spring
1 set of feed pump valves. 1 set of bilge pump valves. a quantity of bolts, nuts, & iron work.

The foregoing is a correct description,

Amicaid & Co Ltd Manufacturer.5*per. C. S. Amicaid*

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

These Engines have been specially surveyed during construction. quality of workmanship
good. shafts examined when being rough turned and found satisfactory. Main steam pipes
satisfactorily tested by hydraulic pressure to 320 lbs per square inch. Engines satisfactorily fitted
on board. all old sea connections and discharge valve chests removed from bowels bottom
and side plating. orifices plated over. And new sea connections & discharge chests new
on vessel's sides. Old Donkey boiler removed from bowel. examined & repaired. two rivet
small patches fitted in crown shell plate. two small riveted patches fitted on side shell plate
crossing orifices where old connections were fitted. a small riveted patch fitted on uptake a
weld. all old valve chests & cocks removed and new connections now fitted. Tested boiler
by hydraulic pressure to 112 lbs per square inch test satisfactory. Boiler refitted in bowel.
New Main boiler shipped on board but not yet chocked in place.

The vessel has now been towed to Glasgow. and the undecomposed items
still to be done for completion of Machinery & Boiler Survey.

1st The Main boiler to be efficiently chocked in bowel. valve chests and
cocks with pipe connections to be fitted in boiler.

2nd The safety valves on Main & Donkey Boilers to be set under steam to
their respective working pressures. and tested.

3rd The Engines to be tested under steam.

The Glasgow surveyors have been advised of above mentioned parts requiring
their attention. and when the survey of Machinery and Boilers are completed and
satisfactorily reported upon they will in my opinion be eligible to be noted in
Register Book & L.M.C. with date in red.

It is submitted that this report be forwarded to the
surveyors at Glasgow for their guidance in completing the survey.

The amount of Entry Fee .. £ 2: - : - received by me, *N.A.*Special .. £ 19: 4: - *43/91*Donkey Boiler Fee .. £ : : - *13/3/1891*

Certificate (if required) .. £ : : -

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute TUES. 17 MAR 1891

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

Greenock District.

Lloyd's Register
Foundation