

REPORT ON MACHINERY.

5691

No. 5691

(Received at London Office RECEIVED 1st. MAR 82.

No. in Survey held at
Reg. Book.

Glasgow

Date, first Survey May 20th Last Survey April 3rd 1882

220 on the

S.S. "Penfrynshire"

Tons 818

Master R. Stirrey

Built at Port-Glasgow

When built

1870

Engines made at

Port-Glasgow

By whom made Black & Gordon when made

1870

rs made at

Glasgow

By whom made R. Anderson when made

1882

Registered Horse Power

90

Owners

H.L. Seligmann & Co Port belonging to Glasgow

GINES, &c.—

Description of Engines

Compound Inverted Surface Condensing

Number of Cylinders 44 & 25" Length of Stroke 30" No. of Rev. per minute 70 Point of Cut off, High Pressure 1/2" Low Pressure 1/2"

Diameter of Screw shaft 8 1/2" Diameter of Tunnel shaft 8 1/2" Diameter of Crank shaft journals 8 1/2" Diameter of Crank pin 8 1/2" size of Crank webs 10 x 6 1/4"

Diameter of screw 10" 2" Pitch of screw 14" 4" No. of blades 4 state whether moveable No total surface 38.5 sq ft.

No. of Feed pumps 2 diameter of ditto 3 1/4" Stroke 15" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes

to they pump from Bilges of Engine Room and all compartments of Vessel

Donkey Engines one Size of Pumps 3" x 6" Where do they pump from Bilges of Engine

Room and all Compartments of Vessel

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 2 1/2" Are they connected to condenser, or to circulating pump Circulating Pump

How are the pumps worked By Levers from Crowheads of both Engines

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Stop Valves & Cocks

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 At

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 Hold Bunkers How are they protected Wood Casing

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes except in Holds

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 Feby 10th 1882

Is the screw shaft tunnel watertight No and fitted with a sluice door Yes worked from Engine Room

OILERS, &c.—

Number of Boilers

one

Description

Cylindrical & Multitubular

Working Pressure

70 lb

Tested by hydraulic pressure to

140 lb

Date of test

23rd January 1882

Description of superheating apparatus or steam chest

None

Can each boiler be worked separately

Yes

Can the superheater be shut off and the boiler worked separately

No Superheater

No. of square feet of fire grate surface in each boiler

46

Description of safety valves

Direct Spring

No. to each boiler

2

area of each valve

14.1 sq in

Are they fitted with easing gear

Yes

No. of safety valves to superheater

None

area of each valve

Yes

are they fitted with easing gear

Yes

Smallest distance between boilers and bunkers or woodwork

9 inches

Diameter of boilers 13' 0" Length of boilers 10' 0" description of riveting of shell long. seams

Double Butt

circum. seams

Lap & r.

Thickness of shell plates 7/8" diameter of rivet holes 1 1/4"

whether punched or drilled drilled

pitch of rivets

4 1/4"

Lap of plating

10"

per centage of strength of longitudinal joint

70

working pressure of shell by rules 100 lb

Size of manholes in shell

15' x 12"

size of compensating rings

6' x 7/8"

No. of Furnaces in each boiler

3

outside diameter

3' 2"

length, top

6' 3"

bottom

9' 3"

Thickness of plates

7/16"

description of joint Double Butt

if rings are fitted & how

greatest length between rings 6' 0"

Working pressure of furnace by the rules

76 lb

Combustion chamber plating, thickness, sides

7/16"

back

7/16"

top

1/2"

Pitch of stays to ditto

sides

8 1/4" x 8 1/4"

back

8 1/4" x 8 1/4"

top

8 1/4" x 8 1/2"

If stays are fitted with nuts or riveted heads

Nuts

working pressure of plating by rules

79 lb

Diameter of stays at smallest part

1 1/4"

working pressure of ditto by rules

108 "

End plates in steam space, thickness

3/4"

pitch of stays to ditto

18' x 16 1/2"

how stays are secured Nuts & Washers

Working pressure by rules

70 lb

diameter of stays at smallest part

2 3/8"

working pressure by rules

88 lb

Front plates at bottom, thickness

3/4"

Back plates, thickness

3/4"

greatest pitch of stays

12' x 8 1/2"

working pressure by rules

72 lb

Lloyd's Register
Foundation

539182

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{1}{2} \times 4\frac{1}{2}$ " thickness of tube plates, front $3\frac{1}{4}$ " back $7\frac{1}{2}$ "
How stayed *Cole stays* pitch of stays $15\frac{1}{2} \times 9$ " width of water spaces 6 "
Diameter of Superheater or Steam chest *None* length *—*
Thickness of plates *—* description of longitudinal joint *—* diameter of rivet holes *—* pitch of rivets *—*
Working pressure of shell by rules *—* 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 *—* How stayed *—*
Superheater or steam chest; how connected to boiler *—*

DONKEY BOILER— Description *Circular Vertical 3 Water Tubes in Shell*
Made at *Glasgow* By whom made *Lees Anderson & Co* when made *1882*
Where fixed *In Stevedore* working pressure *60 lbs* Tested by hydraulic pressure to *120 lbs* No. of Certificate *6*
Fire grate area *10.5 sq ft* Description of safety valves *Direct spring* No. of safety valves *one* area of each *7.29*
If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
Diameter of donkey boiler *4' 9"* length *11' 0"* description of riveting *Double Lap.*
thickness of shell plates *7/16"* diameter of rivet holes *13/16"* whether punched or drilled *Punched*
pitch of rivets *3/4"* lap of plating *4 1/4"* per centage of strength of joint *43*
thickness of crown plates *1/2"* stayed by *3 Round Stays 1 1/2" dia effective*
Diameter of furnace, top *3' 8"* bottom *4' 2"* length of furnace *5' 9"*
thickness of plates *7/16"* description of joint *Lap single riveted*
thickness of furnace crown plates *7/16"* stayed by *Fished to 3" 3 Rod. 3 Round Stays 1 1/2"*
Working pressure of shell by rules *64 lbs* working pressure of furnace by rules *60 lbs*
diameter of uptake *11' x 15'* thickness of plates *1/2"* thickness of water tubes *7/16"*

The foregoing is a correct description,
Manufacturers of Main & Donkey Boilers *Lees Anderson & Co*
Per Sherrill

General Remarks (State quality of workmanship, opinions as to class, &c. *New Main and Donkey Boilers*
supplied and fitted on board. Vessel placed on slipway. Propeller
Shaft examined and found in good condition. A new Propeller fitted
in place satisfactorily. Sea-locks and connections examined and
locks on flat of ships bottom removed to upper turn of bilge
brank and tunnel shafting examined and found in good
order. Pistons, Sliders with their rods and connections
examined and put in good working order.
Surface condenser. Air circulating & Fed. & Bilge Pumps
with their Valves, rods & connections. & Section Pipes & Traces
overhauled and repaired as required. a new Bilge Suction
Valve fitted to circulating Pump.
Spring safety Valves of Main & Donkey Boilers adjusted and
tested under steam and found satisfactory.

The Machinery of this Vessel is now in good order and safe working
Condition. and eligible to be noted in the Society's Register Book
Lloyds. M.C. & N.B. H. 82.

The amount of Entry Fee *1: 0: 0* received by me,
Special *3: 3: 0*
8' new Boilers *6: 6: 0 - 24/4/82*
Certificate (if required) .. *0: 0: 0 28/4/82*
To be sent as per margin.
(Travelling Expenses, if any, £)

The machinery of this vessel
is reported to be in good condition
It is submitted that she is eligible
to have the notification Lloyd's
+ N.B. H. 82 received
D.G.
J.M. Cheson
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute
Lloyds Reg 4/02
N.B. H.

18
Clyde District.
Lloyd's Register
Foundation