

Rpt. 4.

REPORT ON MACHINERY.

No. 52879

Port of *Newcastle on Tyne*

Received at London Office

H.M.R.I. 10 MAY 1907

No. in Survey held at

*Newcastle*Date, first Survey *27 Dec '06*Last Survey *7 May 1907*

Reg. Book.

on the *Blue Sea K "Swan"*(Number of Visits *79*)

Master

Built at

Gosle

By whom built

*Gosle S B & Rep: C L*Tons } Gross
Net

When built

1907

Engines made at

H. Shields

By whom made

Shields Eng: C L

when made

1907

Boiler made at

Newcastle

By whom made

R. S. Stephenson & Co

when made

1907

Registered Horse Power

Owners

*Wright & Mason*Port belonging to *Shedwood*

Nom. Horse Power as per Section 28

80

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

*3*Dia. of Cylinders *12 1/2, 21, 34*

Length of Stroke

25

Revs. per minute

110

Dia. of Screw shaft

7 1/2

Material of

W. I

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

If the liner does not fit tightly at the part

liners are fitted, is the shaft lapped or protected between the liners

If two

Length of stern bush

2' 10"

Dia. of Tunnel shaft

7 1/2

Dia. of Crank shaft journals

6 1/2

Dia. of Crank pin

7

Size of Crank webs

10 1/2 x 4 1/2

Dia. of thrust shaft under

*collars**4"*

Dia. of screw

9' 0"

Pitch of Screw

10' 1 1/2 in

No. of Blades

4

State whether moveable

No

Total surface

29.25 sq ft.

No. of Feed pumps

2

Diameter of ditto

2 3/8

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

2 3/8

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Sizes of Pumps

duplex 5 1/4 x 3 1/2 x 5"

No. and size of Suctions connected to both Bilge and Donkey pumps

*In Engine Room 2 of 2" dia + ejector to all parts**In Holds, &c. 1 of 2" to hold. 2 of 2" to wash well*

No. of Bilge Injections

1

sizes

3 1/2"

Connected to condenser, or to circulating pump

cp

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

Yes

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

Hold Suctions & Winch Steam & Exhaust

How are they protected

Hold Suctions wood casing

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

Dates of examination of completion of fitting of Sea Connections

of Stern Tube

Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record *S*)

Manufacturers of Steel

J. Spence & Son

Total Heating Surface of Boilers

1500 sq ft.

Is Forced Draft fitted

No

No. and Description of Boilers

2 of 4 ft. 11 in. 1 of 4 ft. 11 in.

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

15-3-07

No. of Certificate

7442

Can each boiler be worked separately

Area of fire grate in each boiler

50 sq ft.

No. and Description of Safety Valves to

each boiler

two direct spring

Area of each valve

4.9 sq in.

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Thickness

1 1/2

Range of tensile strength

28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

2 lap

long. seams

d. ship

Diameter of rivet holes in long. seams

1 1/2

Pitch of rivets

7/8

Lap plates or width of butt straps

16

Per centages of strength of longitudinal joint

87

Working pressure of shell by rules

185

Size of manhole in shell

16 x 12

Size of compensating ring

7 x 1 1/2

No. and Description of Furnaces in each boiler

3 Plain

Material

S

Outside diameter

38 1/2

Length of plain part

75

Thickness of plates

3/4

Description of longitudinal joint

Weld

No. of strengthening rings

lay

Working pressure of furnace by the rules

195

Combustion chamber plates: Material

S

Thickness: Sides

5/8

Back

4/8

Top

5/8

Bottom

7/8

Pitch of stays to ditto: Sides

8 1/2 x 8 1/2

Back

9 1/4 x 9

Top

8 1/2 x 8

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

195

Material of stays

S

Thickness

1 1/2

Pitch of stays

16 x 17

How are stays secured

d. & w.

Working pressure by rules

196

Material of stays

S

Area supported by each stay

2.72

Working pressure by rules

185

Material of Front plates at bottom

S

Thickness

1

Material of Lower back plate

S

Thickness

1 1/2

Greatest pitch of stays

as per plan

Working pressure of plate by rules

180

Diameter of tubes

3 1/2

Pitch of tubes

4 3/4 x 4 3/4

Material of tube plates

S

Thickness: Front

1

Back

1 3/16

Mean pitch of stays

9 1/2

Pitch across wide water spaces

14

Working pressures by rules

182

Girders to Chamber tops: Material

S

Depth and

*thickness of girder at centre**8 1/2 x 13 1/4*

Length as per rule

30 1/2

Distance apart

8

Number and pitch of stays in each

2 - 8 1/2

Working pressure by rules

230

Superheater or Steam chest; how connected to boiler

*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

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*

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description	How fitted	
Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey

SPARE GEAR. State the articles supplied :— Two top end bolts & nuts, two bottom end bolts & nuts
two main bearing bolts & nuts, Spare coupling bolts & nuts, Spare feed & Budge pump Valves
and seats, Assorted iron bolts & nuts, Spare propeller,

The foregoing is a correct description,
J. H. Skenebeller Manufacturer.

ROBERT STEPHENSON & CO., LIMITED

J. H. Skenebeller

Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - -
Total No. of visits 17

1906. Dec 27. 1907 Jan 9. 1908 Feb 5. 1908 Mar 15. 1908 Apr 29. May 1. 1908

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

Dates of Examination of principal parts—Cylinders 24.4.07 Slides 24.4.07 Covers 22.3.07 Pistons 29.4.07 Rods 29.4.07
Connecting rods 24.4.07 Crank shaft 24.4.07 Thrust shaft 22.3.07 Tunnel shafts ✓ Screw shaft 22.3.07 Propeller 24.4.07
Stern tube 29.4.07 Steam pipes tested 3.5.07 Engine and boiler seatings 29.4.07 Engines holding down bolts 25.07
Completion of pumping arrangements 7.5.07 Boilers fixed 7.5.07 Engines tried under steam 7.5.07
Main boiler safety valves adjusted 7.6.07 Thickness of adjusting washers 13" SVR 3/8" (1818 ATG)
Material of Crank shaft Steel Identification Mark on Do. 1818 ATG Material of Thrust shaft Steel Identification Mark on Do. 1818 ATG
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 1818 ATG
Material of Steam Pipes Copper Test pressure 360 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. The Mach^y has been built under special survey, the material & workmanship is good.

The sea cocks & valves & stern tube were fitted in dry dock, as the vessel went in one day & came out in the early hours of the next morning & no notice was given, we did not see this work done, the Shields Eng^y Co. N^o Shields, were therefore informed by Mr Shallcross, both personally & by letter, that the Mach^y could only be reported as eligible for classification when the sea cocks & valves & the stern tube had been examined in dry dock by a Surveyor to this Society & reported as having been fitted in a satisfactory manner, Mr Skenebeller the manager stated he had seen the prospective owner & it had been arranged this would be done at Fleetwood at the first convenient opportunity, the correspondence in regard to this is attached herewith.

The Mach^y is eligible in our opinion for classification & the record T.M.C.S.O. when the fitting of the sea cocks & valves & the stern tube have been examined in dry dock & reported as satisfactory.

The amount of Entry Fee.. £ 1 : : : When applied for, - 9 MAY 1907
Special £ 10 : 3 : :
Donkey Boiler Fee £ : : : : When received, 19/5/07
Travelling Expenses (if any) £ : : : : 19/5/07

Committee's Minute

Assigned

TUES. 20 APR 1907

Deferred

Leonard Shallcross
John H Heck
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

FRI. 23 AUG 1907
FRI. 27 DEC 1907
FRI. 17 JAN 1908

Lloyd's Register Foundation