

Rpt. 4.

REPORT ON MACHINERY.

No. 26375

Received at London Office

THU. MAR. 4-1915

Date of writing Report

19

When handed in at Local Office

3 MAR 1915

Port of

SUNDERLAND.

Bristol

No. in Survey held at
Reg. Book.

SUNDERLAND.

Date, First Survey

19 June 14 Last Survey

19 June 1915

on the

S.S. WELSH COAST.

(Number of Visits)

Tons
Gross
Net

When built 1915

Master

T. Bury

Built at

Bristol

By whom built

L. Hill & Sons (S/N 122)

Engines made at

Sunderland

By whom made

George Black Ltd (Nº 1011)

when made

1915

Boilers made at

Sunderland

By whom made

George Black Ltd (Nº 1011)

when made

1915

Registered Horse Power

Owners

Poull, Bacon & Hough Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

174

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

18"-29½"-48½"

Length of Stroke

33

Revs. per minute

Dia. of Screw shaft

as per rule 9.99

Material of

steel

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

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

-

Length of stern bush

3'-4"

Dia. of Tunnel shaft

as per rule 9"

Dia. of Crank shaft journals

as per rule 9.45"

Dia. of Crank pin

9½"

Size of Crank webs

6'15" x 4"

Dia. of thrust shaft under

collars

Dia. of screw

12'-0"

Pitch of Screw

12'-0"

No. of Blades

4

State whether moveable

no

Total surface

47.5 sq ft

No. of Feed pumps

2

Diameter of ditto

2'7½"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3'-0"

Stroke

13"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Three

Sizes of Pumps

5½" x 5½" x 5"

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

-

In Engine Room

Three of 2½"

In Holds, &c.

Two of 2"

No. of Bilge Injections

One size 5"

Connected to

-

or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

Yes 4"

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

Yes

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 Suction

How are they protected

Casing & Lining

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

8.5.15

of Stern Tube

8.5.15

Screw shaft and Propeller

8.5.15

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

-

worked from

-

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Aachen Hütten Verein of Aachen Rthl. Ende

Total Heating Surface of Boilers

3070 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

Two single ended marine

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

2-11-14

No. of Certificate

3255

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

49 sq ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

4.91 sq ft

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or

4 ft

Mean dia. of boilers

13'-1½"

Length

10'-3"

Material of shell plates

steel

Thickness

1¼"

Range of tensile strength

29½-33

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D.R.

long. seams

D.B.S.T.R.

Diameter of rivet holes in long. seams

1½"

Pitch of rivets

7/8"

Lap of plates or width of butt straps

16"

Size of manhole in shell

16" x 12"

Per centages of strength of longitudinal joint

rivets 91.6

plate 85.07

Working pressure of shell by rules

182

Size of manhole in shell

16" x 12"

No. of strengthening rings

none

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 plain

Material

steel

Outside diameter

3'-2½"

Length of plain part

top 6'29½"

Length of plain part

bottom 5'-10"

Thickness of plates

crown 3/32"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

184

Combustion chamber plates: Material

steel

Thickness: Sides

1/16"

Back

45/64"

Top

1/16"

Bottom

1/32"

Pitch of stays to ditto: Sides

9" x 10"

Back

8½" x 10½"

Top

9" x 10"

If stays are fitted with nuts or riveted heads

nut and washers

Working pressure by rules

180

Material of stays

steel

Diameter at smallest part

2'-0.30"

Area supported by each stay

90 sq in

Working pressure by rules

203

End plates in steam space:

-

Material

steel

Thickness

1¾"

Pitch of stays

14" x 19½"

How are stays secured

D.N.

Working pressure by rules

200

Material of Front plates at bottom

steel

Diameter at smallest part

3'-4"

Area supported by each stay

301 sq in

Working pressure by rules

187

Material of Lower back plate

steel

Thickness

3/32"

Material of Lower back plate

steel

Thickness

59/64"

Greatest pitch of stays

16¾" x 9½"

Working pressure of plate by rules

181

Diameter of tubes

3¼"

Pitch of tubes

4½" x 4¾"

Material of tube plates

steel

Thickness: Front

27/32"

Back

¾"

Pitch across wide water spaces

4¼" x 13/16"

Working pressures by rules

276

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

20" x 7½" x 7/8"

Length as per rule

Working pressure by rules

183

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 of end plates

Area of safety valves to superheater

Are they fitted with easing gear

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
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	Per centage of strength of joint	Rivets
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	Plates
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—

2 Top end, 2 bottom end, 2 Main Bearing bolts & nuts, 1 set coupling bolts. spare fuel valve. Set of Valve for fuel & ballast pumps, 12 condenser tubes, iron & bolts & nuts assorted. 3 Sets Piston bolts

The foregoing is a correct description,

FOR GEORGE CLARK, LIMITED

James C. Clark Manufacturer.

Dates of Survey while building	During progress of work in shops	1914 Jun 19 23 Jul 9 14 Aug 6 10 13 18 26 28 Sep 7 10 11 14 18 23 25 Oct 5 8 13
	During erection on board vessel	21 28 29 Nov 2 11 Dec 7 Jan 15 18 Feb 23 1915 March 19 16 18 19 April 2 10 12 26
	Total No. of visits	(29+15) May 11 26 June 1 14 16 17 19

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders	14-9-14	Slides	12-11-14	Covers	5-10-14	Pistons	8-10-14	Rods	21-10-14
Connecting rods	28-10-14	Crank shaft	11-9-14	Thrust shaft	18-9-14	Tunnel shafts	none	Screw shaft	18-1-15
Propeller	18-1-15	Steam pipes tested	11-6-15	Engine and boiler seatings	8-5-15	Engines holding down bolts	26-5-15		
Completion of pumping arrangements	15-6-15	Boilers fixed	10-5-15	Engines tried under steam	19-6-15				
Main boiler safety valves adjusted	16-6-15	Thickness of adjusting washers	7 7/16 53/64 5 11/32 13/32						
Material of Crank shaft	Steel	Identification Mark on Do.	218 EK	Material of Thrust shaft	Steel	Identification Mark on Do.	743H MC		
Material of Tunnel shafts	none	Identification Marks on Do.		Material of Screw shaft	Steel	Identification Marks on Do.	743H MC		
Material of Steam Pipes	Copper solid drawn	Test pressure	360 lbs						

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

The machinery will be forwarded to Bristol to be fitted in the vessel. Local surveyors advised the materials and workmanship are good, the machinery has been constructed under special survey and is eligible in my opinion for classification subject to its being satisfactorily fitted in the vessel.

This machinery has now been fitted in the above vessel. The main steam pipes tested, Safety Valves adjusted to 185 lbs & the engine tried under working conditions. The machinery of this vessel in my opinion is eligible for record F.L.M.C. 6-15

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 6.15.

Certificate (if required) to be sent to

The amount of Entry Fee	£ 2	
Special	2/3 £ 17	8
Donkey Boiler Fee	£	
Travelling Expenses (if any)	£	

Total fee

When applied for.

3 MAR 1915

When received.

30/9/15

Lewis Davis & G. H. Myden
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE JUN 29 1915

Assigned

+ L.M.C. 6.15



© 2020

Lloyd's Register Foundation