

REPORT ON MACHINERY.

No. 16301.

Writing Report

19

When handed in at Local Office

2/8/12

1912. Port of

Received at London Office

WED. AUG. - 7. 1912

Survey held at

Port Glasgow.

Date, First Survey

6th March 1912

Last Survey

31st July 1912.

Book.

on the

S.S. TREGARTH

(Number of Visits 28.)

Built at

Port Glasgow.

By whom built

Dunlop Bremner & Co. Ltd.

Gross 1968.

Net 1118.

When built 1912.

Machinery made at

Port Glasgow.

By whom made

do

when made

1912.

Machinery made at

Glasgow.

By whom made

David Rowan & Co.

when made

1912.

Registered Horse Power

Owners

Rea Shipping Co. Ltd.

Port belonging to

Liverpool

Horse Power as per Section 28

227

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

MACHINERY, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

of Cylinders

20"-33"-56"

Length of Stroke

36"

Revs. per minute

45

Dia. of Screw shaft

as per rule 1.83

Material of

Steel

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

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

When the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

Yes

If two

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

Yes

Length of stern bush

4'-2"

of Tunnel shaft

as per rule 9.943

as fitted 10.5

Dia. of Crank shaft journals

as per rule 10.42

as fitted 10.7

Dia. of Crank pin

11"

Size of Crank webs

20x7 1/2"

Dia. of thrust shaft under

of rs

11"

Dia. of screw

15-3"

Pitch of Screw

14-9"

No. of Blades

4

State whether moveable

No

Total surface

68 sq ft

of Feed pumps

2

Diameter of ditto

3"

Stroke

20"

Can one be overhauled while the other is at work

Yes

of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

20"

Can one be overhauled while the other is at work

Yes

of Donkey Engines

3

SIZES OF PUMPS

8x9x8"

8x9x8"

8x9x8"

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

Engine Room

5, 3" dia

8" dia

Tunnel well

3" dia

In Holds, &c.

4, aft 3" dia

2, fwd 3" dia

of Bilge Injections

1 size

5"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room

Yes

size

3"

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

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

Are the pipes carried through the bunkers

None

How are they protected

Yes

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

27/6/12

of Stern Tube

14/6/12

Screw shaft and Propeller

3/5/12

27/6/12

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

engine room

grating

MACHINERY, &c.—(Letter for record)

See separate report.

Heating Surface of Boilers

3800

Is Forced Draft fitted

No

No. and Description of Boilers

2 triple ended horizontal

Working Pressure

180 lb

Tested by hydraulic pressure to

—

Date of test

—

No. of Certificate

11617

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

56.3 sq ft

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

5.939

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Least distance between boilers or uptakes and bunkers or woodwork

16"

Mean dia. of boilers

14'-8"

Length

10'-8"

Material of shell plates

Steel

Thickness

Range of tensile strength

—

Are the shell plates welded or flanged

—

Descrip. of riveting: cir. seams

—

Seams

Diameter of rivet holes in long. seams

—

Pitch of rivets

—

Lap of plates or width of butt straps

—

Percentages of strength of longitudinal joint

rivets

plate

Working pressure of shell by rules

—

Size of manhole in shell

—

of compensating ring

No. and Description of Furnaces in each boiler

—

Material

—

Outside diameter

—

Thickness of plain part

top

Thickness of plates

crown

Description of longitudinal joint

—

No. of strengthening rings

—

Working pressure of furnace by the rules

Combustion chamber plates: Material

—

Thickness: Sides

—

Back

—

Top

—

Bottom

—

of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

—

Working pressure by rules

—

Material of stays

Diameter at smallest part

—

Area supported by each stay

—

Working pressure by rules

—

End plates in steam space:

—

Material

—

Thickness

—

Pitch of stays

—

How are stays secured

—

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

—

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

—

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

—

across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

—

Depth and

—

Weight of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

—

Working pressure by rules

Superheater or Steam chest; how connected to boiler

None

Can the superheater be shut off and the boiler worked

—

Material

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

—

Fitted 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

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

No. 1 DONKEY BOILER—

No.	Description	By whom made	Manufacturers of Steel	See separate report.
1	Donkey Boiler	Bohrman	Bohrman & Co	
Made at	Amman			
Working pressure	100 lbs			
Valves	Spring loaded			
tested by hydraulic pressure to				
No. of Safety Valves	2			
Date of test				
When made	1912			
Where fixed	Hotchkiss			
No. of Certificate	1149			
Fire grate area	22.54			
Description of				
Pressure to which they are adjusted	102 lbs			
Date of adjustment	30/1/12			
Area of each	4.9			
Pressure to which they are adjusted	102 lbs			
Date of adjustment	30/1/12			
Material of shell plates				
Thickness				
Range of tensile strength				
Whether punched or drilled				
Pitch of rivets				
Lap of plating				
Per centage of strength of joint				
Radius of do.				
No. of stays to do.				
Dia. of stays				
Thickness of furnace crown plates				
Thickness of furnace plates				
Thickness of water tubes				
Radius of do.				
Description of joint				
Stayed by				
Dates of survey				
ARE GEAR.	State the articles supplied :-	2 Connectors		
to 2 main boilers				

SPARE GEAR

State the articles supplied:— 2 connecting rod bolts & nuts, 2 piston rod bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts & nuts, 1 set of pump valves, 1 set of bilge pump valves, a quantity of assorted bolts & nuts, also iron of various sizes.

The foregoing is a correct description,

DUNLOP, BREMEN

The foregoing is a correct description,

DUNLOP, BREMNER & COY., LIMITED

John W. Stewart

Dates of Survey while building { During progress of work in shops - - } 1912. Mar 6. 15. 19. 25. 29. April 5. 10. 12. 24. May 6. 13. 31. June 1. 3. 4. 28.
 { During erection on board vessel - - - }
 Total No. of visits

Manufacturer. John W. Stewart
 Secretary

Dates of Examination of principal parts—Cylinders 13/6/12 Slides 13/5/12 " " donkey " " " " " " " " " " " "

Connecting rods 31/5/12 Crank shaft 3/8/12 Thrust shaft 3/6/12 Covers 13/5/12 Pistons 12/4/12 Rods 12/4/12

Stern tube 10/6/12 Steam pipes tested 23/4/12 Engine and boiler seatings 17/7/12 Engines holding down bolts 26/4/12

Completion of pumping arrangements 26/4/12 Boilers fixed 21/4/12 Engines tried under steam 31/4/12

Main boiler safety valves adjusted 26/7/12 Thickness of adjusting washers S.B. P³/₂" S⁵/₁₆" P.B. P¹³/₃₂" S³/₁₆" O.R. S¹⁹/₃₂" P¹⁹/₃₂"

Material of Crank shaft I Steel Identification Mark on Do. 1099H Material of Thrust shaft I Steel Identification Mark on Do. 1101H

Material of Tunnel shafts I Steel Identification Marks on Do. 1101H Material of Screw shafts I Steel Identification Mark on Do. 1100H

Material of Steam Pipes Copper Identification Marks on Do. 1102H

General Remarks (State quality of workmanship, opinions as to class) Test pressure 400 lbs.

We have been built by [Signature]

General Remarks

Remarks (State quality of workmanship, opinions as to class, &c.) The engines & boilers of this vessel have been built under special survey, and the materials and workmanship are good. On completion they were examined while running full power trials in the Port and found satisfactory. The machinery throughout is now in a good, efficient condition and eligible in our opinion to have the record marked in the Port's Register Book, when the struts carrying the feed heater have been stiffened top and bottom to prevent excessive vibration, the boiler fastenings which are defective have the holes widened and new pins fitted, and new Spring are fitted to the feed pump escape valves. The vessel has sailed for Penarth and the surveyors have been advised of what is required to complete the survey.

The amount of Entry Fee	.. £ 2	When applied for,	19 ..
Special £ 18 15	2/8/	12
Donkey Boiler Fee £		
Travelling Expenses (if any) £	When received,	

Committee's Minute

Assigned

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

FRI. SEP. 20. 1912

Deferred for compl.