

REPORT ON MACHINERY.

No. 33026.

Received at London Office WED. AUG. 20. 1913

Date of writing Report

19

When handed in at Local Office

18-8-10 Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

11-4-12

Last Survey

16-8-1913

(Number of Visits

37)

on the

S.S. "Ceylon"

Tons

Gross 5045

Net 5124

Master

Built at Dumbarton

By whom built A. G. Millan & Son

When built 1913

Engines made at

Glasgow

By whom made

David Rowan & Co.

when made 1913

Boilers made at

do

By whom made

do

when made 1913

Registered Horse Power

Owners Rotterdamse Lloyd

Port belonging to Rotterdam

Nom. Horse Power as per Section 28

458

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

27-44-73

Length of Stroke

48

Revs. per minute

75

Dia. of Screw shaft

as per rule 4.56

as fitted 1.5 3/4

Material of

screw shaft

stut

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

—

If two

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

Length of stern bush

5'-0"

Dia. of Tunnel shaft

as per rule 13.323

Dia. of Crank shaft journals

as per rule 13.323

as fitted 1.4 1/2

Dia. of Crank pin

1 1/2

Size of Crank webs

9"

Dia. of thrust shaft under

collars

1 1/2

Dia. of screw

18-0

Pitch of Screw

18-6

No. of Blades

4

State whether moveable

no

Total surface

100

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

yes

also pr. 9 1/2 x 7 x 2 1/2

No. of Bilge pumps

2

Diameter of ditto

4 1/2"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

SIZES OF PUMPS

9 1/2 x 12

9 1/2 x 12

9 1/2 x 12

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

In Engine Room

4 - 3 1/2"

In Holds, &c.

2 - 3 1/2"

each hold

No. of Bilge Injections

1

sizes

6"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

yes

3 1/2"

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

—

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

for

suctions

How are they protected

wood covering

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

of Stern Tube

8

Screw shaft and Propeller

26/6/13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top grating

BOILERS, &c.—(Letter for record

5)

Manufacturers of Steel

Wm. Beardmore

Total Heating Surface of Boilers

7860

Is Forced Draft fitted

no

No. and Description of Boilers

Three Single Ended

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

4/6/13

No. of Certificate

12133

Can each boiler be worked separately

yes

Area of fire grate in each boiler

60.3

No. and Description of Safety Valves to

each boiler

Lock down double

Area of each valve

5.9

Pressure to which they are adjusted

18.5 lb

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

Mean dia. of boilers

15-8

Length

11-6

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28432

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

D. R. L.

long. seams

D. B. S.

Diameter of rivet holes in long. seams

1 7/16

Pitch of rivets

9"

Lap of plates or width of butt straps

19 1/2"

Per centages of strength of longitudinal joint

rivets 89.25

plate 85.41

Working pressure of shell by rules

180 lb

Size of manhole in shell

16 x 12

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3

Dugblon

Material

stut

Outside diameter

4-0 3/8

Length of plain part

top

bottom

Thickness of plates

crown

7 1/16

Description of longitudinal joint

weld

No. of strengthening rings

—

Working pressure of furnace by the rules

190

Combustion chamber plates: Material

stut

Thickness: Sides

19 1/32

Back

19 1/32

Top

19 1/32

Bottom

7 1/8

Pitch of stays to ditto: Sides

7 x 8 3/4

Back

7 1/8 x 8 3/4

Top

7 x 8 3/4

If stays are fitted with nuts or riveted heads

solid bolts

Working pressure by rules

180

End plates in steam space:

Material of stays

stut

Material of stays

stut

Thickness

1 7/32

Pitch of stays

17 3/4 x 20 1/2

How are stays secured

D. nuts

Working pressure by rules

180

Material of stays

stut

Diameter at smallest part

7-0 6/8

Area supported by each stay

365

Working pressure by rules

200

Material of Front plates at bottom

stut

Thickness

1 5/16

Material of Lower back plate

stut

Thickness

2 5/32

Greatest pitch of stays

12 1/2"

Working pressure of plate by rules

182

Diameter of tubes

3"

Pitch of tubes

4 1/4 x 4 1/8

Material of tube plates

stut

Thickness: Front

1 5/16

Back

3 1/4"

Mean pitch of stays

10 1/2"

Pitch across wide water spaces

13"

Working pressures by rules

180

Girders to Chamber tops: Material

stut

Depth and

thickness of girder at centre

9 1/4 x 7 1/8 x 12

Length as per rule

37 1/8

Distance apart

8 3/4"

Number and pitch of stays in each

4 at 7"

Working pressure by rules

180

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 by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

—

007072-007077-0087

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description *None*

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 _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

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:— *Two top end bolts, 2 bottom end bolts, 2 main bearing bolts, set of coupling bolts - all with nuts, feed & bilge valves, assorted iron etc. Propeller, set air circulating pump valves, 6 boiler tubes, 100 fine bars, etc.*

The foregoing is a correct description,

for David Rowan & Co. Manufacturer.

Dates { During progress of work in shops - - } *1912 April 11-15-19 May 1 1913 July 10-16-21-28 Feb'y 7-28 Mar 12-13 Apr 3-10-17-19-24-28-29*
 of Survey { During erection on board vessel - - - } *May 5-7-23 June 5-4-11-26 July 2-11-17-30-31 Aug 1-7-8-12-13-16*
 while building { Total No. of visits } *37*

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

Dates of Examination of principal parts—Cylinders *2/6/13* Slides *2/6/13* Covers *2/6/13* Pistons *2/6/13* Rods *24/4/13*
 Connecting rods *24/4/13* Crank shaft *2/6/13* Thrust shaft *11/6/13* Tunnel shafts *11/6/13* Screw shaft *11/6/13* Propeller *11/6/13*
 Stern tube *11/6/13* Steam pipes tested *31/7/13* Engine and boiler seatings *11/7/13* Engines holding down bolts *7/8/13*
 Completion of pumping arrangements *12/8/13* Boilers fixed *7/8/13* Engines tried under steam *16/8/13*
 Main boiler safety valves adjusted *13/8/13* Thickness of adjusting washers *P. P 7/16, 5/16, C. P 7/16, 5/16, S. P 7/16, 5/16*
 Material of Crank shaft *steel* Identification Mark on Do. *H.G.S.* Material of Thrust shaft *steel* Identification Mark on Do. *H.G.S.*
 Material of Tunnel shafts *steel* Identification Marks on Do. *H.G.S.* Material of Screw shafts *steel* Identification Marks on Do. *H.G.S.*
 Material of Steam Pipes *Steel* Test pressure *540 lbs.*

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

The engines & boilers of this vessel have been constructed under special survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is, in my opinion, eligible to have notation LMC 8, 13 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8.13

J.H. 20.8.13

The amount of Entry Fee .. £ 3 : 0 :
 Special .. £ 42 : 18 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *15-8-13*
 When received, *18-8-13*

Committee's Minute *GLASGOW 19 AUG 1913*

Assigned *+ LMC 8.13*

H. Gardner-Smith
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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