

REPORT ON MACHINERY.

No. 2921

Port of

Melior

FRI. AUG 27 1920

No. in Survey held at

Melior Haven

Date, first Survey

1st Jan

Last Survey

8th July

1920

Reg. Book.

on the

ST Alexander Scott

(Number of Visits 9)

Master

Built at

Middlesboro

By whom built

Smith Dock Co L^dTons } Gross
Net

When built 1917

Engines made at

Middlesboro

By whom made

Smith Dock Co L^d

when made

1917

Boilers made at

Newcastle on Tyne

By whom made

Hawthorn Leslie & Co L^d

when made

1917

Registered Horse Power

Owners T Henderson, & J P Jones

Port belonging to

Nom. Horse Power as per Section 28

87

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

✓

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

12 1/2 x 21 x 35"

Length of Stroke

26

Revs. per minute

110

Dia. of Screw shaft

as per rule 7.56
as fitted 7 3/8

Material of

Iron

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

34"

Dia. of Tunnel shaft

as per rule 6.57
as fitted 6.75

Dia. of Crank shaft journals

as per rule 6.9
as fitted 7 3/8

Dia. of Crank pin

7 3/8

Size of Crank webs

14 x 4 1/2"

Dia. of thrust shaft under

collars

7 1/8"

Dia. of screw

9.6

Pitch of screw

11-1 1/2"

No. of blades

4

State whether moveable

No

Total surface

35.5 sq ft

No. of Feed pumps

2

Diameter of ditto

2 1/2"

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

2 1/2"

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2 & 3" electric

Sizes of Pumps

6" x 3 x 6 & 6 x 4 x 6

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

In Engine Room

The 2" forward, 2" aft & the separate act.

In Holds, &c.

12' from fore hold, and structural

also

Separate 2" suction from all parts

No. of bilge injections

1

size

3 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate donkey suction fitted in Engine room & size

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

No

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

Forward Suction

How are they protected

Wood Casings

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

✓

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

✓

worked from

BOILERS, &c.—

(Letter for record S)

Total Heating Surface of Boilers

1619

Is forced draft fitted

No

No. and Description of Boilers

1 Single ended

Working Pressure

180

Tested by hydraulic pressure to

360 lb

Date of test

9.7.17

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

2 Spring loaded

Area of each valve

4.9

Pressure to which they are adjusted

185

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8"

Mean dia. of boilers

13.6

Length

10.6

Material of shell plates

3

Thickness

1 3/4"

Range of tensile strength

28-32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

double long, seams

TROBS

Diameter of rivet holes in long. seams

1 5/8"

Pitch of rivets

8

Lap of plates or width of butt straps

17

Per centages of strength of longitudinal joint

rivets 89.3
plate 85.5

Working pressure of shell by rules

180

Size of manhole in shell

16 x 12"

Size of compensating ring

9 1 3/2"

No. and Description of Furnaces in each boiler

3 Plain

Material

S

Outside diameter

40 9/16"

Length of plain part

top 81.5
bottom 76

Thickness of plates

crown 25
bottom 32

Description of longitudinal joint

Welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

S

Thickness: Sides

1 1/8"

Back

3/4"

Top

1 1/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 1/2 x 9 3/8"

Back

9 x 9"

Top

9 1/2 x 9 1/2"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

181

Material of stays

S

Diameter at smallest part

2.07

Area supported by each stay

90.25

Working pressure by rules

206

End plates in steam space:

Material

S

Thickness

1 1/8"

Pitch of stays

17 x 17"

How are stays secured

d n r w

Working pressure by rules

181

Material of stays

S

Diameter at smallest part

6.10

Area supported by each stay

295

Working pressure by rules

215

Material of Front plates at bottom

S

Thickness

3 1/2"

Material of Lower back plate

S

Thickness

1 5/8"

Greatest pitch of stays

14 x 9"

Working pressure of plate by rules

219

Diameter of tubes

3 1/2"

Pitch of tubes

5 x 4 3/4"

Material of tube plates

S

Thickness: Front

3 1/2"

Back

7/8"

Mean pitch of stays

10"

Pitch across wide water spaces

14"

Working pressures by rules

184

Girders to Chamber tops: Material

S

Depth and

Thickness of girder at centre

8 1/2"

Length as per rule

32

Distance apart

9 1/2"

Number and pitch of Stays in each

2 9 1/2"

Working pressure by rules

197

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

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

✓

Working pressure of end plates

Area of safety valves to superheater

DONKEY BOILER— No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety 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 _____ Per centage of strength of joint _____ Rivets _____ 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 _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied: 2 bottom end bolts and nuts 4 top end bolts and nuts 2 main bearing bolts and nuts 1 set of coupling bolts and nuts 1 set of air feed, and bilge pump valves 1 set piston studs and nuts 4 Condenser tubes 3 boiler tubes 1 escape valve spring 1 Donkey pump valve

The foregoing is a correct description,

Manufacturer.

Dates _____ During progress of work in shops - -
 of Survey _____ During erection on board vessel - -
 while building _____ Total No. of _____

Is the approved plan of main boiler forwarded herewith

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

The machinery of this vessel was built under British Corporation Survey to plans and Specification mutually approved by this Society, and B.C. The workmanship appears to good, and in my opinion is eligible to have class assigned L.M.C. 7. 20

The amount of Entry Fee. £ 10 : 10 : When applied for, 10 Aug. 1920
 Special .. £ : :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : : When received, 11 Dec. 1920

Committee's Minute FRI. SEP. 3 1920

Assigned

L.M.C. 7. 20

J. A. Johnston

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

TUE. NOV. 15 1921

FRI. 2 NOV. 1923

FRI. 27 JAN. 1922

FRI. JUL 20 1923

FRI. SEP. 14 1923

TUES. 23 DEC 1924

FRI. 14 MAY 1926

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