

REPORT ON MACHINERY.

No. 27318

Received at London Office

Date of writing Report

19

When handed in at Local Office

31 AUG 1918

Port of

SUNDERLAND.

in Survey held at Sunderland
 on the "KILDRESS"

Date, First Survey

11 Jan '18 Last Survey 15-11-18

(Number of Visits 26)

Master

Built at HullBy whom built Cochran & Co (F&S)

Gross 529
 Tons Net 227
 When built 1915-11

Engines made at SunderlandBy whom made Macdon & P. Mack (294)

when made 1915-11

Boilers made at SunderlandBy whom made Macdon & P. Mack Ltd

when made 1915-11

Registered Horse Power

Owners British Admiralty

Port belonging to

Nom. Horse Power as per Section 28

212

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders

3

No. of Cranks

3

No. of Cylinders

16, 26, 44

Length of Stroke

26

Revs. per minute

180

Dia. of Screw shaft

as per rule 6.45

Material of screw shaft

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

the propeller boss

Yes

If the liner is in more than one length are the joints burned

Yes

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

Yes

If two

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

Yes

Length of stern bush

4-1

Dia. of Tunnels

as per rule 7.9

Dia. of Crank shaft journals

as per rule 8.29

as fitted

8.29

Dia. of Crank pin

8.3

Size of Crank webs

14x5 1/2

Dia. of thrust shaft under

No. of Feed pumps

1

Diameter of ditto

7.9

Stroke

18

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1

Diameter of ditto

6.4

Stroke

18

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Sizes of Pumps

7.9

Stroke

18

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

1.2" in 6" in 1.2" in 6" in 1.2" in 6" in

Engine Room

2

In Holds, &c.

one 2" dia in each compartment

No. of Bilge Injections

1

sizes

6"

Connected to condenser or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

4 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

None

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

How are they protected

Yes

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

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

top platform

MILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Sunderland

Total Heating Surface of Boilers

3490

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 Single End

3490

Working Pressure

200 lb

Tested by hydraulic pressure to

400 lb

Date of test

18.10.18

No. of Certificate

3490

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

51.5

No. and Description of Safety Valves to

1

Are they fitted with easing gear

Yes

Smallest distance between boiler or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

13-0"

Length

11-6"

Material of shell plates

S

Thickness

1/4"

Range of tensile strength

28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap

Pitch of rivets

9"

Lap of plates on width of butt straps

19"

Percentage of strength of longitudinal joint

85

Working pressure of shell by rules

201

Size of manhole in shell

12x16

Size of compensating ring

36 1/2 x 1 1/2 x 1 1/4

No. and Description of Furnaces in each boiler

3 Daylight

Material

S

Outside diameter

41 3/4

Length of plain part

top

Thickness of plates

bottom

Description of longitudinal joint

butt

No. of strengthening rings

1

Working pressure of furnace by the rules

211

Combustion chamber plates: Material

S

Thickness: Sides

3/16"

Back

3/16"

Top

3/16"

Bottom

1"

Pitch of stays to ditto: Sides

8 3/4 x 9

Back

9 x 8 3/4

Top

9 x 8 3/4

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

207

End plates in steam space

Yes

Material of stays

S

Area at smallest part

2.83

Area supported by each stay

78 1/2

Working pressure by rules

232

Material of stays

S

Thickness

1 3/8"

Pitch of stays

17 1/2 x 17 1/2

Area at smallest part

4.4

Area supported by each stay

306

Working pressure by rules

207

Material of Front plates at bottom

S

Thickness

1"

Material of Lower back plate

S

Thickness

1"

Greatest pitch of stays

14 x 9

Working pressure of plate by rules

250

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4 x 3 3/4"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

204

Girders to Chamber tops: Material

S

Depth and

Thickness of girder at centre

8 x 1 3/4"

Length as per rule

31 1/4"

Distance apart

8 1/2"

Number and pitch of stays in each

2. 9"

Working pressure by rules

250

Steam dome: description of joint to shell

Yes

Diam. of rivet holes

1"

Thickness of shell plates

1"

Material

S

Description of longitudinal joint

butt

Diam. of rivet holes

1"

Pitch of rivets

9"

Working pressure of shell by rules

201

Crown plates

Yes

Thickness

1"

How stayed

Yes

SUPERHEATER. Type

S

Date of Approval of Plan

18.10.18

Tested by Hydraulic Pressure to

200 lb

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Yes

Pressure to which each is adjusted

200 lb

Is Easing Gear fitted

Yes

Diameter of Safety Valve

1"

Pressure to which each is adjusted

200 lb

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Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—Two top end and one two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set fuel & lube pump valves, assorted bolts and nuts, brass & various sizes, also spare gun and engine room outfit as per specification.

The foregoing is a correct description.

HAO COLL & POLLOCK LTD.

G. R. Pollock

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1918 Jan 11. Apr 9. 24. 27 May 9. 15. 20 Jun 5. 10. 20. Jul 5. 12. 18. 21. Aug 1. 8. 9. 12. 23. 26
During erection on board vessel - - - Hull: - Apr 11. May 23. Oct 16. 21 Nov 12. 15.
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 24. 6. 18 Slides 24. 6. 18 Covers 24. 6. 18 Pistons 24. 6. 18 Rods 12. 7. 18
Connecting rods 12. 7. 18 Crank shaft 15. 6. 18 Thrust shaft 15. 7. 18 Tunnel shafts 18. 7. 18 Screw shaft 9. 4. 18 Propeller 9. 4. 18
Stern tube 8. 4. 18 Steam pipes tested 14. 3. 18 24. 4. 18 Engine and boiler seatings 5. 8. 18 Engines holding down bolts 5. 8. 18
Completion of pumping arrangements 23. 8. 18 21. 11. 18 Boilers fixed 13. 8. 18 Engines tried under steam 23. 8. 18 21. 10. 18
Completion of fitting sea connections 11. 4. 18 Stern tube 11. 4. 18 Screw shaft and propeller 11. 4. 18
Main boiler safety valves adjusted 23. 8. 18 Thickness of adjusting washers 13. 8. 18 5 1/2, 11. 4. 18 5 3/8

Material of Crank shaft S/M Identification Mark on Do. 294 GAN Material of Thrust shaft S/M Identification Mark on Do. 294 GAN
Material of Tunnel shafts S/M Identification Marks on Do. 294 GAN Material of Screw shafts S/M Identification Marks on Do. 294 GAN
Material of Steam Pipes Iron Test pressure 600 lb. sq. in.

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150° F. -
Have the requirements of Section 49 of the Rules been complied with -
Is this machinery duplicate of a previous case yes If so, state name of vessel "Kildangan", Sunda R^{pt} 27294.

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

The Machinery of this vessel has been constructed under special survey. The materials and workmanship are sound and good and would under the vessel class in my opinion to have used of + L.M.C. with due.

The vessel has now returned to the builders yard for completion. The hold sections have now been completed & the engines satisfactorily tried under full speed for two hours. In my opinion the vessel is eligible for the record + L.M.C. 11-18.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11-18. F.D.

The amount of Entry Fee ... £ 4 :
Special ... £ 61 : 4
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 31 AUG 1918
When received, 1.3.19 RAB

Committee's Minute

Assigned

TUE NOV. 26. 1918
+ L.M.C. 11. 18
FRI. 1 JUN. 1923
TUE SEP. 4. 1923
TUE NOV. 19. 1920
TUE JAN. 30. 1923

W. H. H. Frank L. Stinger
Engineer Surveyor to Lloyd's Register of Shipping.



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Date of writing Report 27
No. in Survey held at
Reg. Book. on the DOCK
Master
Boilers made at
Owners

VERTICAL DONKEY
Made at Annan
tested by hydraulic press
No. of safety valves 2
enter the donkey boiler
strength 28/32
Lap of plating 4 1/2
Radius of do. 39 in
Thickness of furnace plates 1/2
Thickness of tub

6 91 Port
We request

Specially Surveyed

hereby
For boilers up
Horse Power, one
above 200. The N
than 22 28.
MEM.—In ex
all cases where tr
to be defrayed by

No. 8231
his request is made
provide that:—

file the Committee use
od that neither the Com
report or certificate issued
or for any error of judgm

Secretary, Lloyd's Register

Survey F
Travelling

Committ
Assigned

SUNDERLAND.

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)