

REPORT ON MACHINERY.

No. 40213
1920

Received at London Office

Date of writing Report

19

When handed in at Local Office

20. 7.

1920 Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 3. 6. 19.

Last Survey 8. 7. 1920

(Number of Visits 48)

on the

S.S. "RONALD"

Master

Built at

Pt Glasgow

By whom built

R Duncan & Co (No 345)

When built

Gross 6249

Net 3619

Engines made at

Glasgow

By whom made

W Rowan & Co Ltd (No 738)

when made 1920

Boilers made at

Do

By whom made

Do

(No 738)

when made 1920

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

542.9 573

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" 45" 74"

Length of Stroke 51"

Revs. per minute 67

Dia. of Screw shaft

as per rule 15.27"

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

in the propeller boss

Yes

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

Continuously

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

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

Length of stern bush 61 1/2"

Dia. of Tunnel shaft

as per rule 13.66"

Dia. of Crank shaft journals

as per rule 14.35"

Dia. of Crank pin 14 1/2"

Size of Crank webs 28 1/2 x 9 1/4"

Dia. of thrust shaft under

collars 14 3/4"

Dia. of screw 18-6"

No. of Feed pumps 2

Diameter of ditto 8"

Stroke 21"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 4 1/2"

Stroke 27"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

SIZES OF PUMPS

Ballast 9 x 12 x 12

General 8 x 5 x 8

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

In Engine Room (2) 3 1/2"

Stokehold (2) 3 1/2"

In Holds, &c. Cargo hold (4) (2) 3 1/2"

Cross bunker

(2) 3 1/2"

Cargo hold (aft) (2) 3 1/2"

Tunnel well (1) 2 1/2"

No. of Bilge Injections 1

sizes 9"

No. of Bilge Injections 1

sizes 9"

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

Always

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

None

How are they protected

—

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

Upper Deck

BOILERS, &c.—(Letter for record

Manufacturers of Steel

W & A Bell & Sons Ltd

Glasgow

Iron & Steel Co Ltd

No. and Description of Boilers

3 Single ended

Total Heating Surface of Boilers 8700 sq ft

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Single ended

Working Pressure 180 lb

Tested by hydraulic pressure to

360 lb

Date of test 8. 3. 20

No. of Certificate 15160

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 64 sq ft

No. and Description of Safety Valves to

each boiler 2 Spring loaded

Area of each valve 11.17"

Pressure to which they are adjusted 185 lb

Smallest distance between boilers or uptakes and bunkers or woodwork

2' 6"

Mean dia. of boilers 16' 6"

Length 11' 6"

Material of shell plates

Steel

Thickness 1 1/2"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

as Lap

long. seams

TR DBS

Diameter of rivet holes in long. seams 1 5/16"

Pitch of rivets 9 1/8"

Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint

rivets 87.2

plate 85.6

Working pressure of shell by rules 180

Size of manhole in shell

16 x 12"

Size of compensating ring

end flanged

No. and Description of Furnaces in each boiler

3 Corrugated

Material Steel

Outside diameter 51 3/8"

Length of plain part

top

Thickness of plates

crown 19

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules 184

Combustion chamber plates: Material Steel

Thickness: Sides 3/4"

Back 1/6"

Top 3/4"

Bottom 3/4"

Pitch of stays to ditto: Sides 9 1/2 x 10 1/2"

Back 10 1/2 x 8 1/2"

Top 10 1/2 x 10 1/2"

Material of stays Steel

Area at smallest part 2.94

Area supported by each stay 108

Working pressure by rules 200

End plates in steam space:

Material Steel

Thickness 1 1/2"

Pitch of stays 21 3/4 x 21 3/4"

How are stays secured

DN

Area at smallest part 8.29

Area supported by each stay 473

Working pressure by rules 187

Material of Front plates at bottom

Steel

Thickness 7/8"

Material of Lower back plate

Steel

Thickness 5/16"

Greatest pitch of stays 13 1/8"

Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4 x 3 3/8"

Material of tube plates

Steel

Thickness: Front 29

Back 3/4"

Mean pitch of stays 9 7/8"

Pitch across wide water spaces 13 1/4"

Working pressures by rules 180

Girders to Chamber tops: Material Steel

thickness of girder at centre 8 1/2 x 8 1/2"

(2)

Length as per rule 32 7/8"

Distance apart 10 1/4"

Number and pitch of stays in each (2) 10 1/2"

Working pressure by rules 182

Steam dome: description of joint to shell

None

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

None

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

Is Easing Gear fitted

Is Easing Gear fitted

002071-002078-0144

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Top and bolts & nuts, 2 bottom and bolts and nuts, 2 main bearing bolts and nuts, 1 set coupling bolts and nuts set of feed and bilge pump valves Iron bolts and nuts assorted, and other articles.

The foregoing is a correct description,

Dand Rowan & Co Ltd
per Alex. S. S. Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 June 3. July 14. Aug 21. 25 Sept 25 Oct 9. 15. 16. Nov 3. 5. 20 Dec 1. 24.
During erection on board vessel --- 1920 Jan 12. 15. 20. 23. 28. Feb 4. 10. 12. 25. Mar 1. 8. 12. 17. 26. 30 Apr 12. 14. 19. May 5. 13. 14. 18. 19 June 7. 10. 14.
Total No. of visits 48

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 5. 11. 19 Slides 5. 11. 19 Covers 5. 11. 19 Pistons 20. 1. 20 Rods 20. 1. 20

Connecting rods 10. 2. 20 Crank shaft 23. 1. 20 Thrust shaft 30. 3. 20 Tunnel shafts 14. 4. 20 Screw shaft 26. 3. 20 Propeller 26. 3. 20

Stern tube 12. 4. 20 Steam pipes tested 14. 5. 20 Engine and boiler seatings 15. 5. 20 Engines holding down bolts 10. 6. 20

Completion of pumping arrangements 5. 7. 20 Boilers fixed 10. 6. 20 Engines tried under steam 2. 7. 20 8. 7. 20

Completion of fitting sea connections 23. 4. 20 Stern tube 23. 4. 20 Screw shaft and propeller 23. 4. 20

Main boiler safety valves adjusted 2. 7. 20 Thickness of adjusting washers Stalks P 1/2 S 1/2 C 1/2 B 1/2 P 1/2 S 1/2 C 1/2 B 1/2 P 1/2 S 1/2 C 1/2 B 1/2

Material of Crank shaft Steel Identification Mark on Do. TM 23. 1. 20 Material of Thrust shaft Steel Identification Mark on Do. 738 LR 26. 3. 20

Material of Tunnel shafts Steel Identification Marks on Do. * Material of Screw shafts Steel Identification Marks on Do. 738 LR 26. 3. 20

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 No If so, state name of vessel —

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

LR 1261 1463 1114 1121 1232 1250
738 738 738 738 738 738
TM 14. 4. 20 TM 14. 4. 20 TM 14. 4. 20 TM 14. 4. 20 TM 14. 4. 20 TM 14. 4. 20

The machinery of this vessel has been constructed under special survey in accordance with the Rules and approved Plans and has been seen working satisfactorily under steam. Materials and workmanship are good.

The machinery is, in our opinion, eligible to be Classed + L.M.C. 7. 20.

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C. 7. 20. F.D.

The amount of Entry Fee ... £ 3 : - :
Special ... £ 48 : 13 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for,

21. 7. 20.

When received,

31. 8. 20.

as Casthope. H. S. Murray.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 JUL 1920

Assigned + L.M.C. 7. 20.

F.D.



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Lloyd's Register
Foundation