

REPORT ON MACHINERY.

No. 45550

Received at London Office

14 APR 1926

of writing Report

19

When handed in at Local Office

13.4.19 Port of Glasgow

in Survey held at

Glasgow

Date, First Survey

12.6.25

Last Survey

8 April 1926

Book.

on the new steel S/S "DIRECTOR"

(Number of Visits

63)

Gross 5107
Net 3128
Tons

ster

Built at Glasgow

By whom built W. & W. Henderson & Co. Ld (No 722)

When built 1926

ines made at

Glasgow

By whom made W. & W. Henderson & Co. Ld (No 722)

when made 1926

ilers made at

Glasgow

By whom made W. & W. Henderson & Co. Ld (No 722)

when made 1926

gistered Horse Power

Owners Charante SS Co. Ld (T. & J. Harrison)

Port belonging to Liverpool

m. Horse Power as per Section 28

464

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

GINES, &c.—Description of Engines

Triple expansion

No. of Cylinders 3

No. of Cranks 3

a. of Cylinders

26-43-73"

Length of Stroke 48"

Revs. per minute 77

Dia. of Screw shaft

as per rule 4.81
as fitted 15 1/4"

Material of screw shaft

steel

the screw shaft fitted with a continuous liner the whole length of the stern tube yes

the propeller boss yes If the liner is in more than one length are the joints burned -

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

ers are fitted, is the shaft lapped or protected between the liners - Length of stern bush 5'10"

ia. of Tunnel shaft

as per rule 13.5"
as fitted 13 3/8"

Dia. of Crank shaft journals

as per rule 14.206"
as fitted 14 7/8"

Dia. of Crank pin 14 1/2"

Size of Crank webs 9" x 22 3/4"

Dia. of thrust shaft under

rollers 14 1/2"

llars 14 1/2"

Dia. of screw 17'6"

Pitch of Screw 16'-6"

No. of Blades 4

State whether moveable yes

Total surface 98 sq ft

To. of Feed pumps 2

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work yes

2 Woodsons 9 1/2" x 7 1/2"

To. of Bilge pumps 2

Diameter of ditto 4 1/2"

Stroke 24"

Can one be overhauled while the other is at work yes

To. of Donkey Engines 3

Sizes of Pumps 10 1/2 x 12 1/2, 9 1/2 x 9 1/2

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

In Holds, &c. No 1 hold - 2 @ 3 1/2", No 2 hold - 2 @ 3 1/2"

n Engine Room

4 @ 3 1/2"

Deep tank - 2 @ 3 1/2"

No 5 hold - 2 @ 3 1/2"

No 6 hold - 1 @ 3 1/2"

Tunnel well - 1 @ 3"

No. of Bilge Injections 1

sizes 8"

Connected to condenser, or to circulating pump b.p.

Is a separate Donkey Suction fitted in Engine room & size yes 4 1/2"

Are all the bilge suction pipes fitted with roses yes

Are the roses in Engine room always accessible

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 both

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 hold suction

How are they protected under timber boards

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 (R))

Manufacturers of Steel

David Colville & Sons Ltd

Total Heating Surface of Boilers

77060 sq ft

Are Forced Draft fitted no

No. and Description of Boilers

two double ended

Working Pressure

200

Tested by hydraulic pressure to

350

Date of test 18.12.25, 24.12.25

No. of Certificate

17004, 17014

Can each boiler be worked separately yes

Area of fire grate in each boiler

105 sq ft

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

12.560"

Pressure to which they are adjusted 205

Smallest distance between boilers or uptakes and hunkers or woodwork

2'-0"

Mean dia. of boilers

15'-0"

Length

16'-6"

Material of shell plates

steel

Thickness 2 3/8" & 1 3/8"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams

ends DR lap

mid TR lap

long. seams DBS. TR

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

9 13/16" & 9 25/32"

Lap of plates or width of butt straps

2 1/4"

Per centages of strength of longitudinal joint

rivets 92.6

plate 85.3

Working pressure of shell by rules

200

Size of manhole in shell

19 1/2" x 15 1/2"

Size of compensating ring

36 1/2" x 32 1/2" x 1 3/8"

No. and Description of Furnaces in each boiler

6 Morrison

Material

steel

Outside diameter

3'-7 3/16"

Length of plain part

top 19' 3/4"

Thickness of plates

bottom 1 3/8"

Description of longitudinal joint

welded

No. of strengthening rings

-

Working pressure of furnace by the rules

200

Combustion chamber plates: Material

steel

Thickness: Sides

2 3/32"

Back

Top 2 3/32"

Bottom 2 3/32"

Pitch of stays to ditto: Sides

10 1/8" x 8 1/8"

Back

Top 10 1/8" x 8 1/8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

200

Material of stays

steel

Area at smallest part

2.550"

Area supported by each stay

89.80"

Working pressure by rules

202

End plates in steam space:

Material

steel

Thickness

1 3/8"

Pitch of stays

22' x 20"

How are stays secured

N.N.

Working pressure by rules

Area at smallest part

9.675 sq ft

Area supported by each stay

4600"

Working pressure by rules

201

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

-

Thickness

-

Greatest pitch of stays

-

Working pressure of plate by rules

Diameter of tubes

3 1/2"

Pitch of tubes

4 13/16" x 4 5/8"

Material of tube plates

steel

Thickness: Front

1"

Back 7/8"

Pitch across wide water spaces

14 5/8"

Working pressures by rules

F230, B200

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

2 @ 10 3/4" x 7"

Working pressure by rules

200

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

Smoke tube

Date of Approval of Plan

See Mech Rpt

Tested by Hydraulic Pressure to

400 lbs

Date of Test

1-2-26

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

yes

Diameter of Safety Valve

1 1/2"

Pressure to which each is adjusted

207

Is Easing Gear fitted

Is Easing Gear fitted

yes

W233-0148

IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes

SPARE GEAR. State the articles supplied:— In accordance with the Rules and in addition:—

One propeller shaft one propeller boss, two propeller blades, one Thompson coupling, two pairs of top and one pair of bottom end brushes, one air pump rod, one circulating pump impeller and shaft, one set of air pump valves, air pump head valve seating complete, one eccentric sheave and strap, one valve spindle.

The foregoing is a correct description,
For **DAVID & WM HENDERSON & CO., LTD.**

J. H. Patrick DIRECTOR, Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1925. June 12-15, July 2-31, Aug 5-17, 20. Sept 2-8, 14 Oct. 6-8, 12-16, 30 Nov. 9-11, 14-18, 20, 25-26, 30.
During erection on board vessel -- 1926. July 11, 13, 14, 15, 19, 20, 25, 27, 28, 29. July 1, 2, 4, 10, 11, 16, 17, 18, 22, 23, 24, 25, 26. Aug 1-2, 3, 4, 12, 16, 18, 19.
Total No. of visits 63.

Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 26-11-25 Slides 1-2-26 Covers 11-1-26 Pistons 19-1-26 Rods 25-1-26
Connecting rods 20-1-26 Crank shaft 30-11-25 Thrust shaft 25-11-25 Tunnel shafts 25-11-25 Screw shaft 20-1-26 Propeller 20-1-26
Stern tube 13-1-26 Steam pipes tested 29-12-25 Engine and boiler seatings 4-2-26 Engines holding down bolts 3-3-26
Completion of pumping arrangements 12-3-26 Boilers fixed 3-3-26 Engines tried under steam 8-4-26
Completion of fitting sea connections 2-2-26 Stern tube 2-2-26 Screw shaft and propeller 2-2-26
Main boiler safety valves adjusted 12-3-26 Thickness of adjusting washers all 3/8"
Material of Crank shaft steel Identification Mark on Do. LLOYD'S No 7278 L.S.D. 20-1-26 Material of Thrust shaft steel Identification Mark on Do. LLOYD'S No 7278 L.S.D. 25-11-25
Material of Tunnel shafts steel Identification Marks on Do. LLOYD'S No 7278 L.S.D. 25-11-25 Material of Screw shafts steel Identification Marks on Do. LLOYD'S No 7278 L.S.D. 20-1-26
Material of Steam Pipes lapwelded wrought iron Test pressure 600 lb per 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 "Historian"

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

The workmanship and materials are good. The machinery has been constructed under special survey, in accordance with the Rules, satisfactorily fitted in the vessel, tried under steam and found good. It is eligible in my opinion for classification and the Record + LMC 4.26

It is submitted that this vessel is eligible for THE RECORD + LMC 4.26. CL

J.W.D.
14/4/26

S. C. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : :
Special ... £ 94:12 : : 13/4/26 When applied for,
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : : 19.4.26 When received,

Committee's Minute GLASGOW 13 APR 1926

Assigned + LMC 4.26.

Certificate (if required) to be sent to Glasgow.

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

CERTIFICATE WRITTEN 14.4.26



Date of writing R
No. in Reg. Book
on
Master
Engines made
Boilers made a
Nominal Horse
MULTITU
Manufacturers
Total Heating
No. and Desc
Tested by hyd
Area of Fireg
Area of each
In case of don
Smallest dista
Smallest dista
Largest intern
Thickness
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Material
Length of pla
Dimensions of
End plates in
How are stay
Tube plates:
Mean pitch of
Girders to ce
at centre 2
in each
Tensile stren
Pitch of stays
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Thickness
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