

REPORT ON MACHINERY.

No. 15864.

Received at London Office

WED. NOV. 17 1920

Writing Report

19

When handed in at Local Office

9-11-20 Port of Leith

Date, First Survey 28-6-19.

Last Survey 5-11-1920.

(Number of Visits 38)

Survey held at Book.

on the

Leith
Gr Lanrick
Leith

Built at

By whom built Hawthorns & Co. Ltd.

Tons { Gross
Net

When built 1920

Horse Power

Horse Power as per Section 28

Registered Horse Power

Horse Power as per Section 28

296

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

INES, & Co.—Description of Engines

Triple Inverted

No. of Cylinders

3

No. of Cranks

3

of Cylinders

28. 38. 62

Length of Stroke

42

Revs. per minute

Dia. of Screw shaft

as per rule

12.46

Material of

S

as fitted

13

screw shaft

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

Is 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

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

-

If two

Is the shaft lapped or protected between the liners

Length of stern bush

52 3/4

of Tunnel shaft

as per rule

11.48

Dia. of Crank shaft journals

as per rule

13.06

Dia. of Crank pin

12 1/4

Size of Crank webs

22 1/2 x 8

Dia. of thrust shaft under

of Feeds

12 1/4

Dia. of screw

14-6

Pitch of Screw

17'-0"

No. of Blades

4

State whether moveable

no

Total surface

6600

of Bilge pumps

2

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

yes

of Donkey Engines

2

Sizes of Pumps

10 x 11 x 10

7 x 4 1/2 x 8

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

In Holds, &c. No. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

Engine Room

2 no 2" bilge

of Bilge Injections

1

sizes

6 1/2

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

yes-2 1/2"

Are 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 the Discharge Pipes above or below the deep water line

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

Are the Discharge Pipes above or below the deep water line

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

Are the pipes 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

CLERS, & Co.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

4904

Is Forced Draft fitted

no

No. and Description of Boilers

Working Pressure

180 lb.

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

64.7

No. and Description of Safety Valves to

Is each boiler 2-deriel spring

Area of each valve

5.94

Pressure to which they are adjusted

185 lb.

Are they fitted with easing gear

yes

Is the distance between boilers or uptakes and bunkers or woodwork

no side bunkers

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

1. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Percentages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Is the compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Is the pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Is the area at smallest part

Area supported by each stay

Working pressure by rules

Working pressure of plate by rules

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Back

Mean pitch of stays

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Girders to Chamber tops: Material

Depth and

Is the pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Is the thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Is the working pressure by rules

Steam dome: description of joint to shell

% 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

Is the PERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Is the 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

002079-002084-0168

© 2020

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED?

70

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 connecting rod top and bottom ends and main bearing bolts and nuts, 2 eccentric strap bolts nuts, 2 main and auxiliary check valves, 1 set of Luighorn valves, 1 set circulating pump valves, 12 joints pump studs and nuts; one coupling bolts nuts, 12 condenser tubes & ferrules; 1 set of feed & bilge pump valves; 4 gaskets and studs for circulating pump; 12 plain boiler tubes; 2 safety valve springs, assorted bolts and nuts, and iron of various sizes.

The foregoing is a correct description,

HAWTHORN & CO., LIMITED
D. Sutherland
ENGINEER MANAGER
Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919. June 28. July 26. Aug. 1. Sept. 29. Oct. 24. 28. Nov. 6. 13. 27. Dec. 22. Jan. 28. 29. Feb. 21. March 2. 20. 31. April 10. 14. 30. May 11. 20. June 1. 15. 14. July 13. 16. 27. Aug. 30. Sept. 11. 21. 27. Oct. 12. 19. Nov. 2. 5. Total No. of visits 35.

Dates of Examination of principal parts—Cylinders 1-6-20 Slides 28-6-20 Covers 30-4-20 Pistons 28-6-20 Rods 28-6-20 Connecting rods 28-6-20 Crank shaft 22-12-19 Thrust shaft 1-6-20 Tunnel shafts 1-6-20 Screw shaft 30-4-20 Propeller 1-6-20 Stern tube 1-6-20 Steam pipes tested at 96. Engine and boiler seatings 14-6-20 Engines holding down bolts 12-10-20 Completion of pumping arrangements 5-11-20 Boilers fixed 27-9-20 Engines tried under steam 12-10-20 Completion of fitting sea connections 14-6-20 Stern tube 14-6-20 Screw shaft and propeller 14-6-20 Main boiler safety valves adjusted 5-11-20 Thickness of adjusting washers Port boiler 1 1/2 full 5 3/4 full 1 1/2 full 1 1/2 full Identification Mark on Do. 5114 CM LLOYD'S 5114 CM LLOYD'S Identification Marks on Do. 5114 CM LLOYD'S 5114 CM LLOYD'S Material of Crank shaft S Identification Marks on Do. 5114 CM LLOYD'S 5114 CM LLOYD'S Material of Thrust shaft S Identification Marks on Do. 5114 CM LLOYD'S 5114 CM LLOYD'S Material of Tunnel shafts S Identification Marks on Do. 5114 CM LLOYD'S 5114 CM LLOYD'S Material of Screw shafts S Identification Marks on Do. 5114 CM LLOYD'S 5114 CM LLOYD'S Material of Steam Pipes Solid drawn steel Test pressure 540 lb.

Is an installation fitted for burning oil fuel 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery has been built under special survey, and the materials and workmanship are good.
It has now been efficiently fitted on board the vessel, and is eligible in our opinion for record of + LMC 11-20, etc light.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 11. 20

Rel. 24/11/20. JRS

Certificate (if required) to be sent to

The amount of Entry Fee ... £ 2 : : : When applied for, 16-11-1920.
Special ... £ 34-16 : : :
Donkey Boiler Fee ... £ 22-13-0 : : :
Travelling Expenses (if any) £ : : : When received, 4-1-1921

Committee's Minute FRI. NOV. 26 1920
Assigned + LMC 11.20

C. Marshall & J. R. Williams
Engineer Surveyor to Lloyd's Register of Shipping

