

Rpt. 4.

REPORT ON MACHINERY

No. 76296.

FRI. JAN. 5 1923

Date of writing Report

19

When handed in at Local Office

4/11/23 Port of

NEWCASTLE-ON-TYNE

Date, First Survey 3rd March 1920. Last Survey 29th Dec 1922

No. in Survey held at

SUNDERLAND - WALKER-ON-TYNE

Reg. Book.

on the STEEL SCREW STEAMER RALLUS s/s 1167

Master

Built at SUNDERLAND

By whom built SWAN, HUNTER, WIGHAM, RICHARDSON & CO. LTD. when made 1922-5

Engines made at WALKER-ON-TYNE

By whom made SWAN HUNTER, WIGHAM, RICHARDSON & CO. LTD. when made 1922-5

Boilers made at WALKER-ON-TYNE

By whom made SWAN HUNTER, WIGHAM, RICHARDSON & CO. LTD. when made 1922-5

Registered Horse Power

Owners CORK S/S CO. LTD.

Port belonging to

Nom. Horse Power as per Section 28

318

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

Rule = 11.95

as per rule

Material of STEEL

Dia. of Screw shaft

as fitted

screw shaft

Dia. of Cylinders 20 1/2 - 34 - 56

Length of Stroke 42

Revs. per minute

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

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

If two

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

Length of stern bush 49 1/2"

Dia. of Tunnel shaft

as per rule 10.66

Dia. of Crank shaft journals

as per rule 11.21

Dia. of Crank pin 1 1/4"

Size of Crank webs

Collars 1 1/2"

Dia. of screw 14.6

Pitch of Screw 15-6

No. of Blades 4

State whether moveable

NO

Total surface 705

No. of Feed pumps 2

Diameter of ditto 3 1/4"

Stroke 22"

Can one be overhauled while the other is at work

YES

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 22"

Can one be overhauled while the other is at work

YES

No. of Donkey Engines 3

In Engine Room

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

39 3/4" dia TUNNEL WELL. ONE OF 2 1/2" DIA

No. of Bilge Injections 1

size 4"

Connected to condenser, circulating pump

CP

Is a separate Donkey Suction fitted in Engine room & size

YES, 3"

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

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

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 TOP PLATFORM

BOILERS, &c.—(Letter for record)

S

Manufacturers of Steel J. SPENCER & CO. LTD.

Total Heating Surface of Boilers

5000

Is Forced Draft fitted

YES

No. and Description of Boilers 3. SE. CYL. MULTITUBULAR.

Working Pressure

180 LBS

Tested by hydraulic pressure to

360 LBS

Date of test

6.9.21

No. of Certificate

9597

Can each boiler be worked separately

YES

Area of fire grate in each boiler

42 5/8"

No. and Description of Safety Valves to

each boiler TWO DIRECT SPRINK

Area of each valve

7.06"

Pressure to which they are adjusted

185 LBS

Are they fitted with easing gear

YES

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

12-6"

Length 11-6"

Material of shell plates

STEEL

Thickness

31"

Range of tensile strength

29 3/4 to 34 TONS

Are the shell plates welded or flanged

NO

Descrip. of riveting: cir. seams

DR. LAP

long. seams

DB. STRAPS

Diameter of rivet holes in long. seams

1"

Pitch of rivets

7-3 1/2"

Lap of plates or width of butt straps

15"

Per centages of strength of longitudinal joint

rivet 86.1%

Working pressure of shell by rules

182 LBS

Size of manhole in shell

16" x 12"

FLANGED

Size of compensating ring

3-2 7/8 x 2-10 5/8"

No. and Description of Furnaces in each boiler

2. DEIGHTONS

Material

STEEL

Outside diameter

47 7/8"

Length of plain part

top 7-10 1/2"

Thickness of plates

bottom 9/16"

Description of longitudinal joint

WELD

No. of strengthening rings

NONE

Working pressure of furnace by the rules

183 LBS

Combustion chamber plates: Material

STEEL

Thickness: Sides

3/32"

Back

3/32"

Top

3/32"

Bottom

3/32"

Pitch of stays to ditto: Sides

9 x 8 1/2"

Back

8 3/4 x 8 1/2"

Top

9 x 8 1/2"

If stays are fitted with nuts or riveted heads

NUTS

Working pressure by rules

194 LBS

Material of stays

STEEL

Area at smallest part

2.03

Area supported by each stay

76.7"

Working pressure by rules

239 LBS

End plates in steam space:

Material

STEEL

Thickness

1 1/2"

Pitch of stays

18 x 14"

How are stays secured

D.N.W.

Working pressure by rules

183 LBS

Area at smallest part

4.57"

Area supported by each stay

2.52"

Working pressure by rules

188 LBS

Material of Front plates at bottom

STEEL

Thickness

29"

Material of Lower back plate

STEEL

Thickness

1"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

268 LBS

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4 x 3 3/4"

Material of tube plates

STEEL

Thickness: Front

29"

Back

3/4"

Mean pitch of stays

9 3/8"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

184-229

Girders to Chamber tops: Material

STEEL

Depth and

thickness of girder at centre

9 1/8 x 1 1/4"

Length as per rule

30 1/2"

Distance apart

9"

Number and pitch of stays in each

TWO OF 8 1/2"-P

Working pressure by rules

182 LBS

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

DINHO-01119-0178

IS A DONKEY BOILER FITTED? **NO**

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—Two top End bolts and nuts, two bottom End bolts and nuts, two main bearing bolts and nuts, spare Coupling bolts and nuts, spare Ted and bilge pump valves, Assorted iron, bolts and nuts, and Various Engine Room stores. 56 main boiler tubes, 1 spare propeller, 1 piston Rod gland bush and neck ring, 1 Slide Rod gland bush and neck ring, 6 junk Ring bolts. 56 main Boiler Tubes —

The foregoing is a correct description.

SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

Manufacturer.

1920. 1921. 1922.
Dates of Survey while building { During progress of work in shops — March 3, April 28, May 5, July 26, 27, Aug. 1, 11, 18, 23, 26, 27, Sept. 14, 23, Oct. 29, Nov. 30, Dec. 2, 6, 8, Jan. 14, Feb. 1, 3, 15, 16, 21, 28, Mar. 4, 7, 11, 14, 16, 18, 30, April 14, 19, May 10, 30, July 13, 20, Aug. 5, 23, Sept. 5, 8, Jan. 6, 9, 11, 13, 14, 26, 30, 31, Feb. 2, 8, 10, 21, 22, 23, 24, Mar. 2, 9, 13, 14, 15, 16, 21, 23, 24, 30, April 4, 8, 12, 13, 26, 27, 28, May 5, 12, 19, June 1, Aug. 3, Dec. 29.
Total No. of visits — 81.
Is the approved plan of main boiler forwarded herewith **YES.**

HP. CYL. TBSTED. WP. 225 LBS.

Dates of Examination of principal parts — Cylinders 16.3.22 Slides 16.3.22 Covers 16.3.22 Pistons 16.3.22 Rods 16.3.22
Connecting rods 16.3.22 Crank shaft 23.3.22 Thrust shaft 6.4.22 Tunnel shafts 6.4.22 Screw shaft 23.3.22 Propeller 14.3.22
Stern tube 16.3.22 Steam pipes tested 7.4.22 Engine and boiler seatings 14.3.22 Engines holding down bolts 12.4.22
Completion of pumping arrangements 19.5.22 Boilers fixed 28.4.22 Engines tried under steam 28/4/22
Completion of fitting sea connections 16.3.22 Stern tube 16.3.22 Screw shaft and propeller 16.3.22
Main boiler safety valves adjusted 28.4.22 Thickness of adjusting washers ST. B. P. 7-5/16 PT. B. P. 5-13/32
Material of Crank shaft steel Identification Mark on Do. 5284-N Material of Thrust shaft steel Identification Mark on Do. 3516-D-MR
Material of Tunnel shafts steel Identification Marks on Do. 5165-D-MR Material of Screw shafts steel Identification Marks on Do. 5765-D-MR
Material of Steam Pipes steel Test pressure 540 lb. TESTED AT S.H.W.R. 11/12/22

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

If so, state name of vessel **Sister vessels of Kittiwake Merganser**

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

The Machinery built under Special Survey the material and workmanship found good and efficient.

The Engines and Boilers, auxiliary machinery, fitted up on board the Vessel, tested under steam. main Engines working ahead and astern (Vessel at Moorings) and found satisfactory.

In my opinion the Vessel is now eligible for the notation of + L.M.C. to be made in the Register Book — Propeller outside fastenings examined in dry dock, satisfactory. 28/12/22 29 December 1922. Attended. Sea trials. The machinery working satisfactorily and now eligible for the record of + L.M.C. 12.22.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 12.22. F.D. C.L.

The amount of Entry Fee ... £ 5 : 0

When applied for.

Special ... £ 72 : 14

When received.

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When received.

Committee's Minute

TUE. JAN. 9 1923

Assigned

+ dmb 12.22

30, L.



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