

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

APR - 7 1941

Date of writing Report

19

When handed in at Local Office

4. 4

1941 Port of

Belfast

To. in Survey held at Reg. Book.

Belfast.

Date, First Survey 1<sup>st</sup> Aug 1940

Last Survey 30 March 1941

(Number of Visits 78)

on the

STEEL SC

"ARMERIA"

Built at

Belfast

By whom built

Heslop & Wolff Ltd

Yard No.

1098

Tons

Net

When built

1941

Engines made at

Belfast

By whom made

Heslop & Wolff Ltd

Engine No.

1098

When made

1941

Boilers made at

Belfast

By whom made

Heslop & Wolff Ltd

Boilers No.

1098

When made

1941

Registered Horse Power

Owners

The Admiralty

Port belonging to

Nom. Horse Power as per Rule

399

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes.

Trade for which Vessel is intended

Admiralty Service

Engines, &c.

Description of Engines

Four Cylinder Inverted Triple Expansion.

Revs. per minute

185

Dia. of Cylinders

18 1/2 - 31 - 38 1/2 - 38 1/2

Length of Stroke

30"

No. of Cylinders

4

No. of Cranks

4

Crank shaft, dia. of journals

as per Rule

10.035"

Crank pin dia.

10 1/2"

Crank webs

Mid. length breadth

16 3/4"

Thickness parallel to axis

6 1/2"

as fitted

10 1/2"

Mid. length thickness

6 1/2"

shrink

Thickness around eye-hole

4 3/4"

Intermediate Shafts, diameter

as per Rule

10 1/4"

as fitted

10 1/4"

Thrust shaft, diameter at collars

as per Rule

10.035"

as fitted

10 1/4"

Tube Shafts, diameter

as per Rule

10 1/4"

as fitted

10 1/4"

Screw Shaft, diameter

as per Rule

10.432"

as fitted

10 3/8"

Is the

screw

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule

3/8"

Thickness between bushes

as per Rule

19 3/32"

as fitted

19 3/32"

Is the after end of the liner made watertight in the

propeller boss

Yes

One Length.

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

Yes

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Yes

shaft

No

If so, state type

10-6"

Pitch

10-8"

No. of Blades

3

Material

Man. Bronze

whether Moveable

Solid

Total Developed Surface

31

sq. feet

Feed Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Bilge Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Feed Pumps

No. and size

2 off 8 1/2" x 6" x 18"

main

Aux.

Pumps connected to the

Main Bilge Line

No. and size

2 off 50 lbs. each

How driven

Steam

Hand

Ballast Pumps, No. and size

As for Bilge

Lubricating Oil Pumps, including Spare Pump, No. and size

Yes

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Bilge Pumps;—In Engine and Boiler Room

Eng. Room 2 @ 3"

Boiler Rooms 4 @ 3"

including 3 direct suction

In Pump Room

In Holds, &c.

12 @ 2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size

One @ 9 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

One @ 3" in E.R.

one @ 3" in each B.R. Room

Are all the Bilge Suction Pipes in holds and

tunnel well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes

Are all Sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with Valves or Cocks

Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes

Are the Overboard Discharges above or below the deep water line

At water line

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 pass through the bunkers

None (Leaking Cocks only)

How are they protected

Yes

What pipes pass through the deep tanks

Yes

Have they been tested as per Rule

Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

worked from

Yes

MAIN BOILERS, &c.—(Letter for record S.)

Total Heating Surface of Boilers

6852 sq. ft.

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 Multitubular

Howden-Johnson

type

Working Pressure

225 lbs./sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS.

Are approved plans forwarded herewith for Staffing

(If not state date of approval)

Main Boilers

Auxiliary Boilers

Donkey Boilers

Superheaters

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

Please see attached list.

The foregoing is a correct description,

For HARLAND AND WOLFF, LIMITED

Secretary



© 2021

Lloyd's Register Foundation

003778 003787-0072



1940  
 Aug 1 Nov 7 13 21 25 26 28 30 Dec 3 6 7 16 17 18 23 24 30 31 Jan 1 3 4 6 7 8 9 10 11 15  
 15 16 19 21 22 23 24 25 27 28 29 30 Feb 3 6 10 11 12 13 14 17 19 20 21 22 24 25 26 27  
 28 Mar 6 7 11 12 13 14 15 17 18 19 21 22 24 25 26 27 28 29 30  
 Dates of Survey while building  
 During progress of work in shops - -  
 During erection on board vessel - -  
 Total No. of visits 78

Dates of Examination of principal parts—Cylinders 13.1.41 to 23.1.41 Slides 13.1.41 to 23.1.41 Covers 13.1.41 to 23.1.41  
 Pistons 25.1.41 to 2.2.41 Piston Rods 25.1.41 to 3.2.41 Connecting rods 25.1.41 to 29.1.41  
 Crank shaft 26.1.41 Thrust shaft 13.11.40 Intermediate shafts 9.1.41  
 Tube shaft ✓ Screw shaft 9.1.41 Propeller 6.1.41  
 Stern tube 14.1.41 Engine and boiler seatings 15.1.41 Engines holding down bolts 26.2.41  
 Completion of fitting sea connections 15.1.41  
 Completion of pumping arrangements 17.3.41 Boilers fixed 6.3.41 Engines tried under steam 18.3.41 + 25.3.41  
 Main boiler safety valves adjusted 17.3.41 Thickness of adjusting washers FORD BLR P 5/8" S 9/32" AFTER BLR P 1/2" S 1/2"  
 Crank shaft material Steel Identification Mark LLOYDS No. 1021 RLA 24.1.41 Thrust shaft material Steel Identification Mark LLOYDS No. 372 RS 9.1.41  
 Intermediate shafts, material Steel Identification Marks LLOYDS No. 372 RS 9.1.41 Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark LLOYDS No. 372 RS 9.1.41 Steam Pipes, material SD Steel Test pressure 675 lb Date of Test 11.10.40  
 Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes  
 Have the requirements of the Rules for the use of oil as fuel been complied with Yes  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with ✓  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓  
 Is this machinery duplicate of a previous case Yes If so, state name of vessel "ABELIA" etc

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under Special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. This machinery has been efficiently installed onboard the vessel and tried out under full working conditions at sea, with satisfactory results. In our opinion the vessel is eligible for the notation in the Society's Register Book of ..

FLMC 3.41 CL 2SB 225 lbs. FD.

The amount of Entry Fee ... £ : : When applied for, 19  
 Special ... £ 170 : : When received, 19  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ ✓ : : 19

Committee's Minute

Assigned

14th Feb 1941

Att. for oil fueln 22, CL

Ren. S. Thomas

Engineer Surveyor to Lloyd's Register of Shipping.

La R. L. Carter & Co.



© 2021

Lloyd's Register Foundation