

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

13 DEC 1930

Date of writing Report

When handed in at Local Office

10 DEC 1930

Port of

LIVERPOOL.

No. in Survey held at

Birkenhead

Date, First Survey

11th June/30

Last Survey

27th Nov/1930.

Reg. Book.

89947 on the S. S. 'Calder'

(Number of Visits 57)

Tons

Gross 1195

Net

Built at

Birkenhead

By whom built

Messrs Cammell Laird & Co Ltd

Yard No.

976

When built

1930

Engines made at

Birkenhead

By whom made

Cammell Laird & Co Ltd

Engine No.

976

When made

1930

Boilers made at

Birkenhead

By whom made

Cammell Laird & Co Ltd

Boiler No.

976

When made

1930

Registered Horse Power

Owners

London Midland & Scottish Railway

Port belonging to

Birkenhead

Nom. Horse Power as per Rule

352

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

Yls

Tonnage for which Vessel is intended

ENGINES, &c.—Description of Engines

Dia. of Cylinders

22", 36", 61"

Length of Stroke

39"

No. of Cylinders

Three

Revs. per minute

95

Crank shaft, dia. of journals

as per Rule 11.73"

as fitted 12 1/4"

Crank pin dia.

12 3/4"

Crank webs

Mid. length breadth

23 3/4"

Thickness parallel to axis

7 1/2"

Intermediate Shafts, diameter

as per Rule 11.18"

as fitted 11 1/4"

Thrust shaft, diameter at collars

as per Rule 11.73"

as fitted 12 3/4"

Thickness around eye-hole

5 1/2"

Is the

screw

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 12.74"

as fitted 14 1/4"

Is the

screw

shaft fitted with a continuous liner

Yls

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

as fitted

Is the after end of the liner made watertight in the

propeller boss

Yls

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

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

Yls

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

Yls

Length of Bearing in Stern Bush next to and supporting propeller

4' 9"

Is the

shaft

Yls

If so, state type

Propeller, dia.

13' 0"

Pitch

16' 6"

No. of Blades

4

Material

Cast Iron

whether Movable

no

Feed Pumps worked from the Main Engines, No.

none

Diameter

Stroke

Can one be overhauled while the other is at work

Yls

Can one be overhauled while the other is at work

Yls

Yls

Yls

Bilge Pumps worked from the Main Engines, No.

2

Diameter

Stroke

20"

Can one be overhauled while the other is at work

Yls

Yls

Yls

Yls

Feed Pumps

No. and size

2 - 9 1/2" x 7" x 2' 0"

How driven

steam

Pumps connected to the

No. and size

1 - 8" x 9" x 8' - 1 - 7" x 7" x 12'

How driven

steam

Ballast Pumps, No. and size

1 - 8" x 9" x 8'

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

Yls

Are two independent means arranged for circulating water through the

Oil Cooler

Yls

Suctions, connected to both Main Bilge Pumps and Auxiliary

Yls

Yls

Bilge Pumps; In Engine and Boiler Room

Engine Room 2 - 2 1/2"

Boiler Room 2 - 2 1/2"

In Pump Room

2 - 2 1/2" dia', Tunnel 1 - 2 1/2" dia'

In Holds, &c.

8' 1" hold, 2 - 2 1/2"; 8' 2" hold 2 - 2 1/2"; 8' 3" hold

2 - 2 1/2" dia', Tunnel 1 - 2 1/2" dia'

Yls

Yls

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

1 - 3 1/2" dia'

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

Yls

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

Yls

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

Yls

Are they fitted with Valves or Cocks

both

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

Yls

Are the Overboard Discharges above or below the deep water line

Yls

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

Yls

How are they protected

Thick wood casing

Yls

Yls

What Pipes pass through the bunkers

Large ballast pipes

Have they been tested as per Rule

Yls

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

Yls

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

Yls

Yls

Is the Shaft Tunnel watertight

Yls

Is it fitted with a watertight door

Yls

worked from

upper deck

Yls

Yls

Yls

Yls

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

Total Heating Surface of Boilers

5220 sq' ft

Is Forced Draft fitted

Yls

No. and Description of Boilers

Two Cylindrical Multitubular

Working Pressure

200 lb sq"

Yls

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yls

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

Yls

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

Yls

Yls

Yls

PLANS. Are approved plans forwarded herewith for Shafting

Yls

Main Boilers

Yls

Auxiliary Boilers

Yls

Donkey Boilers

Yls

Yls

Yls

Superheaters

General Pumping Arrangements

Yls

Oil fuel Burning Piping Arrangements

Yls

Yls

Yls

Yls

Yls

Yls

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yls

State the principal additional spare gear supplied

One crankshaft set of crank pin braces, set of crosshead

braces, 6 junk ring bolts, an pump bucket rod, circulating pump impeller spindle

piston & pump rods for feed pump, ballast pump, an engine crankshaft

and other items in accordance with attached list.

Yls

Yls

CAMMELL LAIRD AND COMPANY LIMITED.

The foregoing is a correct description.

SECRETARY

Manufacturer.



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Lloyd's Register Foundation

W615-0243

Dates of Survey while building
During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits 57

Dates of Examination of principal parts—Cylinders 11/7/30 17/7/30 25/8/30 23/9/30 Slides 14/8/30 24/9/30 Covers 25/8/30 17/9/30
Pistons 24/8/30 9/9/30 Piston Rods 10/7/30 24/7/30 Connecting rods 27/8/30 9/9/30
Crank shaft 14/8/30 24/9/30 27/9/30 9/9/30 Thrust shaft 25/8/30 Intermediate shafts 14/8/30 27/8/30
Tube shaft ✓ Screw shaft 25/8/30 27/8/30 20/9/30 Propeller 7/10/30
Stern tube 24/8/30 20/9/30 Engine and boiler seatings 7/10/30 Engines holding down bolts 23/10/30
Completion of fitting sea connections 7/10/30 Boilers fixed 16/10/30 Engines tried under steam 27/10/30
Completion of pumping arrangements 11/11/30 Thickness of adjusting washers all 3/8"
Main boiler safety valves adjusted 11/11/30 Crank shaft material Steel Identification Mark Thrust shaft material Steel Identification Mark 3962 Rvz
Intermediate shafts, material steel Identification Marks 3462 Rvz Tube shaft, material ✓ Identification Mark ✓
Screw shaft, material steel Identification Mark 3947 Rvz Steam Pipes, material steel ✓ Test pressure 10/10/30 24/10/30
Is an installation fitted for burning oil fuel ho Is the flash point of the oil to be used over 150°F. ✓
Have the requirements of the Rules for the use of oil as fuel been complied with ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ho 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 ho If so, state name of vessel ✓
General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery of this vessel has been constructed under special survey, and in accordance with the Rules and the approved plans. The workmanship is good. On completion, the Machinery was examined under full working conditions during sea trials, and found satisfactory, and is eligible in my opinion for record of L.M.C. 11.30 in Register book.

The amount of Entry Fee ... £ 5 : 0 : 0
Special ... £ 77 : 16 : 0
Donkey Boiler Fee ... £ 5 : 10 : 0
Travelling Expenses (if any) £ : :
When applied for, 9/12/30
When received, 31.12.1930

J. J. Melton

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 12 DEC. 1930

Assigned + L.M.C. 11.30.

CERTIFICATE WRITTEN 15/12/30

Elec. Light. O.C. EBR



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