

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

DEC 23 1938

Date of writing Report

19

When handed in at Local Office

21 DEC 1938

Port of

SUNDERLAND.

No. in Survey held at  
Reg. Book.

Sunderland

Date, First Survey

Aug 5

Last Survey

Dec 12 1938

on the

FULHAM IV

(Number of Visits 35)

Tons }  
Gross  
Net

Built at

Burntisland

By whom built

Burntisland H.B. Co. Ltd.

Yard No. 225

When built 1938

Engines made at

Sunderland

By whom made

R.E. Morris Eng. Co. Ltd.

Engine No. 2928

When made 1938

Boilers made at

do.

By whom made

do.

Boiler No. do.

When made do.

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Rule

196

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

Trade for which Vessel is intended

Coal

## ENGINES, &amp;c.—Description of Engines

Triple expansion

Revs. per minute

Dia. of Cylinders

16 1/2", 27 1/2", 4 1/2"

Length of Stroke

33"

No. of Cylinders

3

No. of Cranks

3

Crank shaft, dia. of journals

as per Rule 9 1/2"

Crank pin dia.

9 1/2"

Crank webs

Mid. length breadth

Mid. length thickness

shrunk

Thickness parallel to axis 5 1/4"

Intermediate Shafts, diameter

as per Rule

as fitted 8.75"

Thrust shaft, diameter at collars

as per Rule

as fitted 9 7/8"

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted 10 3/4"

Is the tube

screw

shaft fitted with a continuous liner

no

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

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

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

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

shaft

yes

If so, state type

Cochran's

Length of Bearing in Stern Bush next to and supporting propeller 31 9"

Propeller, dia.

13' 2"

Pitch

13' 0"

No. of Blades

4

Material

C.I.

whether Moveable

not

Total Developed Surface 58 sq. feet

Feed Pumps worked from the Main Engines, No.

2

Diameter

2 3/4"

Stroke

16 1/2"

Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No.

2

Diameter

2 3/4"

Stroke

16 1/2"

Can one be overhauled while the other is at work

Feed

Pumps

No. and size

6" x 4 1/4" x 6"; 1, 4" x 2 3/4" x 5"

Pumps connected to the

Main Bilge Line

No. and size

2, 9" x 10" x 10"

How driven

steam

Ballast Pumps, No. and size

2, 9" x 10" x 10"

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

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

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room

Eng. Rm.

1 &amp; 2 1/2" dia.

Blr. Rm.

1 &amp; 2 1/2" dia.

In Pump Room

In Holds, &amp;c.

1 &amp; 3 1/2" in No. 1; 2 &amp; 3" in No. 2.

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

1, 7" dia.

No. and size

1, 4" dia.

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

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

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

yes

Are they fitted with Valves or Cocks

yes

Are the Overboard Discharges above or below the deep water line

above

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

yes

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

yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

yes

How are they protected

—

What Pipes pass through the bunkers

none

What pipes pass through the deep tanks

—

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

—

Is it fitted with a watertight door

—

worked from

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—

—



1938. Aug. 5, Sep. 5, 6, 8, 13, 15, 19, 20, 21, 22, 24, 26, 27, 29. Oct. 4, 5, 11, 13, 18, 21, 26.  
 During progress of work in shops - - -  
 During erection on board vessel - - -  
 Total No. of visits 35

Dates of Examination of principal parts—Cylinders 5/3/38 Slides 15/11/38 Covers 15/11/38  
 Pistons 21/9/38 Piston Rods 21/9/38 Connecting rods 21/9/38  
 Crank shaft 26/9/38 Thrust shaft 26/10/38 Intermediate shafts —  
 Tube shaft — Screw shaft 5/10/38 Propeller 5/10/38  
 Stern tube 21/10/38, 17/11/38 Engine and boiler seatings — Engines holding down bolts 25/11/38  
 Completion of fitting sea connections *see Link Rpt.*  
 Completion of pumping arrangements *see Link Rpt.* Boilers fixed 25/11/38 Engines tried under steam 8/12/38  
 Main boiler safety valves adjusted 8/12/38 Thickness of adjusting washers Main 1/2" both. Donkey 1/32" std. 2 1/32" post.  
 Crank shaft material *steel* Identification Mark 6601/2 Thrust shaft material *steel* Identification Mark 814  
 Intermediate shafts, material — Identification Marks — Tube shaft, material — Identification Mark —  
 Screw shaft, material *steel* Identification Mark 813 Steam Pipes, material *steel* Test pressure 600 Date of Test 24/11/38  
 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 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 *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 *not required*  
 Is this machinery duplicate of a previous case *no* 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 in accordance with the approved plans, Secretary's letters and the requirements of the Rules. The workmanship and materials are good. The machinery has been efficiently fitted on board and tried under working conditions (except as mentioned below) and found satisfactory and is eligible, in my opinion, for the

NOTATION + L.M.C. 12.38

When the following requirements have been carried out:—  
 The testing of the pumping arrangements of 1. The No. 2. hold bilges;  
 2. the ballast pump to the casements; 3. the feed pump and injector to the donkey boiler.  
 Arrangements have been made for completion at Link. Surveyors advised.

*L. R. Howe.*

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : : : When applied for,  
 Special ... £ 49 : : : 20 DEC 1938  
 Donkey Boiler Fee ... £ : : :  
 Travelling Expenses (if any) £ : : : 24 12 1938

Committee's Minute FRI 27 JAN 1939

Assigned + L.M.C. 1.35

OG. Out Ex