

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

28 APR 1928

Date of writing Report

When handed in at Local Office

27 APR. 1928

Port of *Funderland*No. in Survey held at *Funderland*  
Reg. Book.

Date, First Survey

11<sup>th</sup> Feb 27

Last Survey

24<sup>th</sup> Apr 1928

(Number of Visits 78)

40058 on the

*S.S. "BARBARA MARIE"*

Tons Gross 4223

Net 2535

When built 1928

Built at *Funderland*

By whom built

*Li. J. Priestman & Co*

Yard No. 278

Engines made at *Funderland*

By whom made

*George Clark Ltd*

Engine No. 1150

when made 1928

Boilers made at *Funderland*

By whom made

*Do*

Boiler No. 1150

when made 1928

Registered Horse Power

Owners *The Hiffside Shipping Co*Port belonging to *Newcastle*

Nom. Horse Power as per Rule 375

Is Refrigerating Machinery fitted for cargo purposes

*No*

Is Electric Light fitted

*Yes*

Trade for which Vessel is intended

*General*

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

*Triple expansion*

Revs. per minute 73

Dia. of Cylinders 25" 41" 69"

Length of Stroke 48"

No. of Cylinders 3

No. of Cranks 3

Crank shaft, dia. of journals

as per Rule 13.213

Crank pin dia. 13 1/2"

Crank webs

Mid. length breadth 20"

Mid. length thickness 8 1/2"

Thickness parallel to axis 8 1/2"

Thickness around eye-hole 5 1/8"

Intermediate Shafts, diameter

as per Rule 12.184"

as fitted 12 3/8"

Thrust shaft, diameter at collars

as per Rule 13.213"

as fitted 13 1/2"

Tube Shafts, diameter

as per Rule 14.142"

as fitted 14 1/2"

Screw Shaft, diameter

as per Rule 14.142"

as fitted 14 1/2"

Is the tube shaft fitted with a continuous liner

*Yes*

Bronze Liners, thickness in way of bushes

as per Rule 72

as fitted 3/4"

Thickness between bushes

as per Rule 72

as fitted 3/4"

Is the after end of the liner made watertight in the

propeller boss

*Yes*

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

Length of Bearing in Stern Bush next to and supporting propeller 5' 0"

Propeller, dia. 17-6 Pitch 17-3 No. of Blades 4 Material C.I. whether Movable *No* Total Developed Surface 98.5 sq. feetFeed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 26" Can one be overhauled while the other is at work *Yes*Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/4" Stroke 26" Can one be overhauled while the other is at work *Yes*

Feed Pumps No. and size 1 Feed 14" x 5" x 6" Pumps connected to the Main Bilge Line No. and size 1 2 9" x 10" x 10"

How driven *Steam* How driven *Steam*Ballast Pumps, No. and size *One Ballast 9" x 10" x 10"* Lubricating Oil Pumps, including Spare Pump, No. and sizeAre two independent means arranged for circulating water through the Oil Cooler *Yes* Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room 4 2 2 1/2" 8 1 2 2 1/2" Tunnel Well

In Holds, &c. *No 1, 2 2 3" No 2, 2 2 3 1/2" No 3, 2 2 3 1/2" No 4, 2 2 3"*

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 2 8" Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 2 4 1/2" 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 *Both*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 *Above*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* How are they protectedWhat pipes pass through the deep tanks *None* Have they been tested as per RuleAre 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 *Yes* worked from *Top of Main Pump*

MAIN BOILERS, &amp;c.—(Letter for record 5.) Total Heating Surface of Boilers 6009 sq. ft.

Is Forced Draft fitted *No* No. and Description of Boilers *Three large Marine S.E.* Working Pressure 180 lbs. s. i.IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded?PLANS. Are approved plans forwarded herewith for Shafting 13/1/27 Main Boilers *Yes* Auxiliary Boilers *Yes* Donkey Boilers *Yes*

(If not state date of approval)

Superheaters *Yes* General Pumping Arrangements *Yes* Oil fuel Burning Piping Arrangements *Yes*

SPARE GEAR. State the articles supplied:—2 Connecting Rod Top End 2 Connecting Rod Bottom End

both 8 inch 2 main bearing bolts 1 set of coupling bolts 1 set feed &amp; bilge pump

valves 1 set safety valve springs a quantity of assorted bolts &amp; nuts &amp;

iron of various sizes 1 C.I. propeller 1 set air circulating

pump valves 8 boiler tubes 46 condenser tubes

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED

*Woodhall*

Manufacturer.



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Lloyd's Register  
Foundation

W336-0107

During progress of work in shops - - 1927. Feb. 11, 15, 17, 23. Mar. 2, 4, 9, 15, 16, 17, 21, 23, 24, 28, 31. Apr. 6, 11, 13, 25, 27, 29, 18, 20, 25. June. 1, 9, 13, 16, 20, 21.  
 July. 19, 21, 25, 27, 29. Aug. 12, 23. Sep. 1, 9, 15, 21, 26, 28, 30. Oct. 5, 7, 10, 18. Nov. 15, 21. Dec. 2, 16, 22, 23.  
 During erection on board vessel - - 1928. Jan. 4, 12, 11, 16, 19, 30. Feb. 1, 23, 28. Mar. 8, 12, 13, 14, 15, 16, 19, 20, 22, 26. Apr. 12, 16, 23, 24.  
 Total No. of visits 78

Dates of Examination of principal parts—Cylinders 28/6/27 Slides 13/4/27 Covers 21/9/27  
 Pistons 23/3/27 Piston Rods 6/4/27 Connecting rods 27/7/27  
 Crank shaft 26/9/27 Thrust shaft 26/9/27 Intermediate shafts 1/2/28  
 Tube shaft - Screw shaft 10/1/28 Propeller 1/9/27  
 Stern tube 23/8/27 Engine and boiler seatings 12/3/28 Engines holding down bolts 14/3/28  
 Completion of fitting sea connections 20/3/28 & 28/2/28.  
 Completion of pumping arrangements 20/3/28 Boilers fixed 20/3/28 Engines tried under steam 19/3/28  
 Main boiler safety valves adjusted 19/3/28 Thickness of adjusting washers PORT B. 5 1/2" CENTRE B. 5 1/2" 5 1/2" 5 1/2" 5 1/2" 5 1/2"  
 Crank shaft material I. STEEL Identification Mark 945 Thrust shaft material I. STEEL Identification Mark 998  
 Intermediate shafts, material I. STEEL Identification Marks 869, 868, 851 Tube shaft, material Identification Mark -  
 Screw shaft, material I. STEEL Identification Mark 998 Steam Pipes, material L.W. STEEL Test pressure 540 lbs. Date of Test 12/3/28  
 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 carrying and burning oil fuel been complied with -  
 Is this machinery duplicate of a previous case No If so, state name of vessel S. S. FRANCES MASSEY.

**General Remarks** (State quality of workmanship, opinions as to class, &c. The engines & boilers of this vessel have been built under special survey & the materials & workmanship are good. On completion they were tried under a full head of steam with satisfactory results. The machinery throughout is now in a good & efficient condition & eligible in our opinion to have the notation L.M.C.-4-28 marked in Red in the Society's Register Book also T.S. C.L.

**NOTE** — While the vessel was entering the South Dock after the morning trial the propeller fouled the Quay Wall (18/4/28) and about three feet was broken from one of the blades. The vessel was tipped tail end shaft drawn inboard examined, afterwards replaced and a new cast iron propeller fitted (see damage report attached).

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 4-28 C.L.

The amount of Entry Fee ... £ 5-0-0 When applied for, 10 APR 1928  
 Special ... £ 8-5-0  
 Donkey Boiler Fee ... £ 3-3-0 When received, 26 APR 1928  
 Travelling Expenses (if any) £ : : 25 APR 1928  
 9.5.28

Committee's Minute

Assigned

FRI. 4 MAY 1928

+ L.M.C. 4-28 C.L.

CERTIFICATE WRITTEN

J. I. Griffiths.  
 Harbottle.  
 Engineer Surveyor to Lloyd's Register of Shipping.

