

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report

19

When handed in at Local Office

1 DEC 1941

Port of

SUNDERLAND.

Received at London Office

79 DEC 1941

No. in Survey held at

Sunderland

Date, First Survey

10 June

Last Survey

9 Dec

1941

Reg. Book.

on the

S.S. "EMPIRE HALLEY"

(Number of Visits)

77

Gross

7168

Tons

Net

4290

Built at

Sunderland

By whom built

J. I. Thompson &amp; Sons, Ltd

Yard No.

612

When built

1941

Engines made at

do.

By whom made

H. E. Mann &amp; Co. (1938)

Yard No.

4008

When made

1941

Boilers made at

do.

By whom made

do.

Boiler No.

do.

When made

do.

Registered Horse Power

Owners

W. I. Gould &amp; Co. Ltd

Port belonging to

Sunderland

Nom. Horse Power as per Rule

506

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

Dia. of Cylinders

24", 39", 68"

Length of Stroke

48"

No. of Cylinders

3

No. of Cranks

3

Crank shaft, dia. of journals

as per Rule 13.78"

as fitted 14"

Crank pin dia.

14"

Crank webs

Mid. length breadth

shrunk

Thickness parallel to axis

8 3/4" x 9 1/4"

Thickness around eye-hole

7 1/2" x 7"

Intermediate Shafts, diameter

as per Rule 13.13"

as fitted 13 1/4"

Thrust shaft, diameter at collars

as per Rule 13.78"

as fitted 14"

Tube Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule 14.67"

as fitted 15"

Is the

tube

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule 23.9/32"

as fitted 3 1/4"

Thickness between bushes

as per Rule 9/16"

as fitted 2 1/32"

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

no

If so, state type

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

shaft

no

Length of Bearing in Stern Bush next to and supporting propeller

5'-0"

Propeller, dia.

18'-0"

Pitch

No. of Blades

4

Material

C.I.

whether Moveable

not

Total Developed Surface

117

sq. feet

Feed Pumps worked from the Main Engines, No.

0

Diameter

Stroke

Can one be overhauled while the other is at work

no

Bilge Pumps worked from the Main Engines, No.

2

Diameter

Stroke

26"

Can one be overhauled while the other is at work

yes

Feed Pumps

No. and size

2, 9 1/2" x 7" x 21"

How driven

Steam

Pumps connected to the

Main Bilge Line

No. and size

1, 8" x 5 1/4" x 9" x 1, 9" x 11" x 10"

How driven

Steam

Ballast Pumps, No. and size

1, 9" x 11" x 10"

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

no

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. 2" x 3" dia.; 1" x 2" dia.; Boiler Rm. 2" x 3" dia.; Dry tank 2" x 3" dia.

In Pump Room

In Holds, &amp;c. 2" x 3" dia. in each of Holds Nos. 1, 2, 3, 4 &amp; 5.

Tunnel Well 1" x 2 1/2" dia.; Deep tanks 6" dia. port &amp; starboard.

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

1" x 9" dia.

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

1" x 5" dia. &amp; 1" x 3" dia.

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

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 pass through the bunkers

none

How are they protected

none

What pipes pass through the deep tanks

none

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

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

no

worked from

no

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

Total Heating Surface of Boilers

5716 + 1682 =

7398

sq. ft.

Is Forced Draft fitted

yes

No. and Description of Boilers

2 S.E. &amp; 1 Aux.

Working Pressure

220 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

yes

IS A DONKEY BOILER FITTED?

no

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

no

If so, is a report now forwarded?

no

PLANS.

Are approved plans forwarded herewith for Shafting

(If not state date of approval)

4/10/41

Main Boilers

1/16/41

Auxiliary Boilers

9/14/41

Donkey Boilers

no

Superheaters

General Pumping Arrangements

in London

Oil fuel Burning Piping Arrangements

no

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

J. H. Smith

RESIDENT MANAGER.

Manufacturer.



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002435-002441-0083



1941. June 10, 18, 30. July 2, 3, 11, 16, 28, 31. Aug. 5, 6, 7, 9, 11, 13, 15, 18, 25, 26, 29. Sep. 1, 3, 4.  
During progress of work in shops - -  
5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 20, 22, 23, 25, 26, 29. Oct. 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 20, 21, 22.  
Dates of Survey while building  
During erection on board vessel - - -  
24, 25, 27, 29, 30, 31. Nov. 1, 4, 5, 6, 7, 11, 13, 26, 27, 28, 29. Dec. 2, 5, 7.  
Total No. of visits 77

Dates of Examination of principal parts—Cylinders 5/6/41, 3/10/41 Slides 10/10/41 Covers 5/6/41, 3/10/41  
Pistons 10/10/41 Piston Rods 29/9/41 Connecting rods 27/10/41  
Crank shaft 26/9/41 Thrust shaft 24/10/41 Intermediate shafts 24/10/41  
Tube shaft — Screw shaft 29/9/41 Propeller 7/10/41  
Stern tube 18/9/41 Engine and boiler seatings 25/9/41 Engines holding down bolts 24/10/41  
Completion of fitting sea connections 25/9/41  
Completion of pumping arrangements 28/11/41 Boilers fixed 13/11/41 Engines tried under steam 13/11/41  
Main boiler safety valves adjusted 13/11/41 Thickness of adjusting washers Port 1/2" port 1/16" std; C 3/8"; Std 1/2" port 1/16" std.  
Crank shaft material Steel Identification Mark 5839 Thrust shaft material Steel Identification Mark 5853  
Intermediate shafts, material Steel Identification Marks 6025/6/48/9 Tube shaft, material — Identification Mark —  
Screw shaft, material Steel Identification Mark 5854 Steam Pipes, material Steel Test pressure 660 lbs. Date of Test 8.10.41 to 17.10.41  
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 (see below)  
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. Workmanship and materials are good. The machinery has been efficiently fitted on board and tried under working with satisfactory results and is eligible, in my opinion, to have the notation

+ L.M.C. 12-41, C.L., 2 S.B. & 1 Aux 220 lbs.

L.R. Home

Note:—Steaming connections, through reducing valves, have subsequently been fitted to the sea connections & stern tube. L.R.H.

The amount of Entry Fee ... £ 6 : : When applied for,  
Special ... £ 100 : 6 : 9 Dec 19 41  
Donkey Boiler Fee ... £ 25 : 1 :  
Travelling Expenses (if any) £ : : When received, 12 Dec 19 41

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE 6 JAN 1942

+ LMC 12.41 FD CL



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