

27 JAN 1930

Bel 10.302

No 48900

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY

20 FEB 1929

Date of writing Report

16th Feb.

19 29 When handed in at Local Office

16th Feb.

19 29 Port of

Received at London Office

GLASGOW.

No. in Survey held at
Leg. Book.

Date, First Survey

31. 8. 28

Last Survey

4th Feb. 19 29.

Number of Visits

12

13820

Single
Twin
Triple
Quadruple

Screw vessel

"HIGHLAND HOPE"

Tons { Gross
Net

Built at

Glasgow

By whom built

Harland & Wolff Ltd.

Yard No. 8134. When built 1929.

Engines made at

Belfast

By whom made

do.

Engine No. 813 When made 1929

Donkey Boilers made at

Lincoln

By whom made

Babcock & Wilcox Ltd.

Boiler No. 73/4152 When made 1930

Brake Horse Power

Owners

Helen Stn. Har. Co. Ltd. (H.A. Nelson)

Port belonging to Belfast

Nom. Horse Power as per Rule 2190

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which vessel is intended

Ocean-going

L ENGINES, &c.—Type of Engines

2 or 4 stroke cycle

Single or double acting

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

Is there a bearing between each crank

Revolutions per minute

Flywheel dia.

Weight

Means of ignition

Kind of fuel used

Crank Shaft, dia. of journals

as per Rule

Crank pin dia.

Crank Webs

Mid. length breadth

Thickness parallel to axis

Flywheel Shaft, diameter

as per Rule

Intermediate Shafts, diameter

as per Rule

Thrust Shaft, diameter at collars

as per Rule

Tube Shaft, diameter

as per Rule

Screw Shaft, diameter

as per Rule

Is the { tube screw } shaft fitted with a continuous liner { Yes

Bronze Liners, thickness in way of bushes

as per Rule

Thickness between bushes

as per Rule

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

Propeller, dia.

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched

Means of lubrication

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled or lagged with

Non-conducting material

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

Three 6" bore vertical centrifugal: 120 tons/hr.

How driven

Electric Motors

Ballast Pumps, No. and size

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, No. and size:—In Machinery Spaces

Two @ 3 1/2" & One @ 2 1/2" in forward tunnel: Three @ 3 1/2" & Two @ 2 1/2" in aft tunnel.

Holds, &c. Nos. 1, 2 & 3 holds each

Two @ 3 1/2" & One @ 2 1/2" in aft tunnel.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Three @ 6" & One @ 7"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Spaces

Are they fitted with Valves or Cocks

Both

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

Do all pipes pass through the bunkers

How are they protected

Do all pipes pass through the deep tanks

No 2 & 4 oil suction pass thru No 1 & 3 tanks

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

apartment to another

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Bel. Rpt.

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Serving Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Are the internal surfaces of the receivers be examined

What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

Thickness

Material, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Working Air Receivers, No.

Total cubic capacity

Internal diameter

Thickness

Material, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Working Air Receivers, No.

Total cubic capacity

Internal diameter

Thickness

Material, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

W610-D175

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting

Receivers

Separate Tanks

(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

Date of writing

No. in
Reg. Book

23280

Built at

Engines made

Boiler made

Owners

VERTICAL

Made at

Manufacturer

Total Heating

No. and Des

Tested by hy

Area of Fir

Area of each

State whether

or woodwork

Shell plates

Are the shell

Dia. of rice

Working p

Shell Crow

Tensile stre

Description

Thickness

Pitch of su

Diameter of

Thickness of

Combustion

Radius if a

Length as p

Diameter of

Tube Plate

If comprisi

Is each alt

Girders to

Depth and

Distance of

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops - -	1928 Aug 31 Nov 3 12 14 27 Dec 4 6 13 (1929) Jan 17 21 23 Feb 4
During erection on board vessel - -	
Total No. of visits	12

Dates of Examination of principal parts—Cylinders ——— Covers ——— Pistons ——— Rods ——— Connecting rods ———

Crank shaft ——— Flywheel shaft ——— Thrust shaft ——— Intermediate shafts ——— Tube shaft ———

Screw shaft ——— Propeller ——— Stern tubes 31-8-29 4-5-12-29 Engine seatings 21-1-29 Engines holding down bolts ———

Completion of fitting sea connections 21-1-29 Completion of pumping arrangements 29-1-29 Engines tried under working conditions ———

Crank shaft, Material ——— Identification Mark ——— Flywheel shaft, Material ——— Identification Mark ———

Thrust shaft, Material ——— Identification Mark ——— Intermediate shafts, Material ——— Identification Marks ———

Tube shaft, Material ——— Identification Mark ——— Screw shaft, Material ——— Identification Mark ———

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ——— If so, have the requirements of the Rules been complied with ———

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Tu. Sc. M.V. "HIGHLAND MONARCH"*

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel's sea rocks, stern tubes,*

propellers & propeller shafts have been properly fitted prior to the

launching of the vessel. The riveting of the engine seats has been

examined, pipes in & passing thro' oil bunkers have been tested

& all bilges pumped in accordance with the Rules of

this Society. The material & workmanship thro' out are good.

The vessel is being towed to Belfast & have the

Machinery installed ——— Belfast Surveyors advised re

part of Survey carried out at Glasgow.

all 15/2/29

GLASGOW 10 FEB 1929

Deferred.

See other

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FRID 31 JAN 1930

J. D. Boyle

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ : : When applied for.

Special ... £ : : 19

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 19

Committee's Minute

Assigned

Deferred.