

REPORT ON OIL ENGINE MACHINERY.

No. 70619

Received at London Office

20 APR 1946

Date of writing Report

19

When handed in at Local Office

17. 4. 1946

Port of

GLASGOW.

in Survey held at

GLASGOW

Date, First Survey

20: 3: 46.

Last Survey

11th April, 1946.

Book.

Number of Visits

7

 645 on the Twin
Triple
Quadruple

Screw vessel.

M/V "EMPIRE GRANADA"

Tons

Gross 8238

Net 479.6

Built at

GLASGOW

By whom built

HARLAND & WOLFF LTD.

Yard No. 1197

When built 1946.

Engines made at

GLASGOW

By whom made

HARLAND & WOLFF LTD.

Engine No. 9507

When made 1946.

Boilers made at

BELFAST.

By whom made

HARLAND & WOLFF LTD.

Boiler No.

When made 1946.

Horse Power

3200

Owners

BRITISH TANKER CO., LTD.

Port belonging to

LONDON.

Horse Power as per Rule

490

Is Refrigerating Machinery fitted for cargo purposes

NO

Is Electric Light fitted

YES

Vessel for which vessel is intended

TAN KER.

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

Indicated Pressure

Position 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

Solid forged
Semi built
All built

dia. of journals

as per Rule
as fitted

Crank pin dia.

Crank webs

Mid. length breadth
Mid. length thickness

shrunk

Thickness parallel to axis
Thickness around eye-hole

Flywheel Shaft, diameter

as per Rule
as fitted

Intermediate Shafts, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule
as fitted

Liner 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 part 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 bushes 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 space between them lapped or protected between the liners

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

Diameter of tube shaft

If so, state type

Length of bearing in Stern Bush next to and supporting propeller

Propeller, dia.

Pitch

No. of blades

Material

Whether moveable

Total developed surface

sq. feet

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Means of

Lubrication

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled

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

1 Main engine 80 tons

1 Bilge & Sanitary 100 tons

1 Ballast 170 tons

How driven

Main Engine

Steam

Steam

Is the cooling water led to the bilges

No

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Arrangements

Ballast Pumps, No. and size

1 off 170 tons

Power Driven Lubricating Oil Pumps, including spare pump, No. and size

1. Main engine 100 tons

1. Weirs " 100 "

1. Main engine 100 tons

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

Yes

Suctions, connected to both main bilge pumps and auxiliary

Bilge pumps, No. and size:—In machinery spaces

Engine Room 3 off 3 1/2"

2 off 2" gutterways

In pump room 1 1/2"

Holds, &c.

O.F.T.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size

3 off 6"

Are all the bilge suction pipes in the bilges fitted with strum-boxes

Yes

Are the bilge suction pipes in the machinery spaces 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 platform plates

Yes

Are the overboard discharges above or below the deep water line

Below

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

What pipes pass through the deep tanks

Have they been tested as per Rule

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

None

Is it fitted with a watertight door

—worked from—

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.

None

No. of stages

diameters

stroke

driven by

Auxiliary Air Compressors, No.

2

No. of stages

2

diameters

280 m/m
245 m/m

stroke

130 m/m

driven by

Steam

Small Auxiliary Air Compressors, No.

No. of stages

diameters

stroke

driven by

What provision is made for first charging the air receivers

Steam driven compressor.

Scavenging Air Pumps, No.

None

diameter

stroke

driven by

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

Steam driven

No.

Two

Have the auxiliary engines been constructed under special survey

Is a report sent herewith

No

AIR RECEIVERS:—Have they been made under survey..... **Yes** ✓ State No. of report or certificate. **See Gls.Rpt.70305**

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

Can the internal surfaces of the receivers be examined and cleaned..... Is a drain fitted at the lowest part of each receiver.....

Injection Air Receivers, No. **None** Cubic capacity of each..... Internal diameter..... thickness.....

Seamless, lap welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

Starting Air Receivers, No. **Two** Total cubic capacity **900 cu.ft.** Internal diameter **6'0⁵/₁₆"** thickness **1.**

Seamless, lap welded or riveted longitudinal joint **Riveted.** Material **Steel** Range of tensile strength **28/32** Working pressure **361.**

IS A DONKEY BOILER FITTED **Yes** ✓ If so, is a report now forwarded **Forwarded with Gls.Rpt.70305(24/1/46).**

Is the donkey boiler intended to be used for domestic purposes only..... **No.**

PLANS. Are approved plans forwarded herewith for shafting..... **15:1:44 7:1:44** Receivers..... **2:12:43** Separate fuel tanks..... **6:**

Donkey boilers. **Approved Belfast** General pumping arrangements..... **6/4/46** Pumping arrangements in machinery space..... **6/4/46.**

Oil fuel burning arrangements..... **6/4/46.**

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... **Yes**

State the principal additional spare gear supplied..... **As per Rules & specification.**

The foregoing is a correct description,

For **HARLAND AND WOLFE, LIMITED.**

Wm. J. Wright.

Finnleton Secretary

Manufacturer.

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of visits..... **7**

1946 hands of 1.3.4.8.10.11

See Gls.Rpt.No.70305.

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 **4:4:46.** Stern tube **4:4:46.** Engine seatings **20:3:46.** Engine holding down bolts **20:3:46**

Completion of fitting sea connections **4:4:46.** Completion of pumping arrangements **11:4:46.** Engines tried under working conditions **11:4:46**

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.....

Identification marks on air receivers..... **See Glasgow Report 70305.**

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with..... **Yes** ✓

Description of fire extinguishing apparatus fitted..... **Steam and foamite.** ✓

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.....

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..... **Yes** ✓ If so, state name of vessel..... **BRITISH MIGHT.** ✓

General Remarks (State quality of workmanship, opinions as to class, &c..... **The machinery and Auxiliary Boilers of**

this vessel have been properly fitted on board the vessel, afterward tried under full working

conditions with satisfactory results. The safety valves of both boilers have been adjusted under

steam to the working pressure and found satisfactory, and is eligible in my opinion to have the

record in the Register Book of L.M.C. 4,46,7/2 D.B. W.P. 150 lbs per sq.inch.

Boiler safety valve compression washers sizes Port Blr.7/16" 7/16" L.R. Cert.1266 Belfast.

Starbd. 15/32"13/32" " 1267 "

NOTE: It was stated that the vessel's name will be changed to "British Piper" on the vessels return to the U.K.

The amount of Entry Fee..... £.....

See London Ltr.

Special **2/4/46**..... £ **19 : 0 : 0**

When applied for..... **19**

Donkey Boiler Fee..... £.....

When received..... **19**

Travelling Expenses (if any) £.....

Committee's Minute

Assigned.....

Transmit to London

FRI. 10 MAY 1946

G. E. Mardock
Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation