

REPORT ON OIL ENGINE MACHINERY.

No. **70619**

Received at London Office **20 APR 1946**

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 Single Screw vessel **M/V "EMPIRE GRANADA"** Tons **8238**
 Triple Net **479.6**
 Quadruple

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. **AMS.462** When made **1946.**

Key Boilers made at **BELFAST.** By whom made **HARLAND & WOLFF LTD.** Boiler No. When made **1946.**

Indicated Horse Power **3200** Owners **BRITISH TANKER CO., LTD.** Port belonging to **LONDON.**

Actual 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 **M/V 697 TAN KER.**

ENGINES, &c. —Type of Engines..... 2 or 4 stroke cycle..... Single or double acting.....

Minimum 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.....

Crankshaft: Solid forged dia. of journals as per Rule..... Crank pin dia..... Crank webs Mid. length breadth..... Thickness parallel to axis.....
 Semi built as fitted..... Mid. length thickness..... shrunk Thickness around eye-hole.....
 All built

Propeller Shaft, diameter as per Rule..... Intermediate Shafts, diameter as per Rule..... Thrust Shaft, diameter at collars as fitted.....
 as fitted..... as fitted..... as fitted.....

Tube Shaft, diameter as per Rule..... Screw Shaft, diameter as per Rule..... Is the (tube) shaft fitted with a continuous liner (.....
 as fitted..... as fitted..... as fitted.....)

Oil Liners, thickness in way of bushes as per Rule..... Thickness between bushes as fitted..... Is the after end of the liner made watertight in the
 as fitted..... as fitted.....

Propeller boss..... If the liner is in more than one tube, are the junctions made by fusion through the whole thickness of the liner.....

the liner does not fit tightly at the part between the rings 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 lapped or protected between the liners..... Is an approved Oil Gland or other appliance fitted at the after
 end 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 " ✓

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 3½" 2 off 2" gutterways** ✓ In pump room **1. 2½"** ✓
O.F.T. ✓

Are all the bilge suction pipes in ~~held and tested~~ fitted with strum-boxes **Yes** ✓ Are the bilge suction 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** stroke **130 m/m** driven by **Steam** ✓
245 m/m

Small Auxiliary Air Compressors, No. No. of stages..... diameters..... stroke..... driven by.....

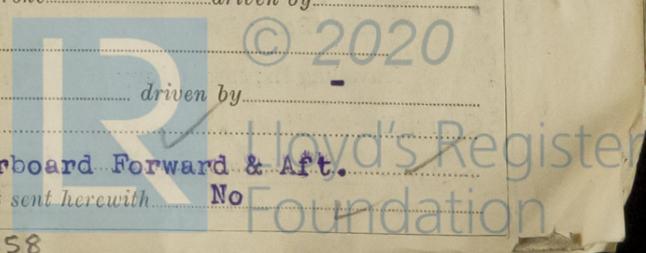
What provision is made for first charging the air receivers..... **Steam driven compressor.**

Scavenging Air Pumps, No. **None** diameter..... stroke..... driven by.....

Auxiliary Engines crank shafts, diameter as per Rule..... No. **Two**
 as fitted..... **Steam driven** Position **Starboard Forward & Aft.**

Have the auxiliary engines been constructed under special survey..... Is a report sent herewith **No**

GLASGOW REPORT 70305
 M/V "EMPIRE GRANADA"



AIR RECEIVERS:—Have they been made under survey **Yes** ✓ State No. of report or certificate. **See Gls.Rpt.7030**

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 **by Rules -**

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

Seamless, lap welded or riveted longitudinal joint **Riveted.** Material **Steel** Range of tensile strength **28/32** Working pressure **by Rules 361.** Actual **356**

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:**
(If not, state date of approval) **23:12:44**

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

Oil fuel buring 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. Manufacturer.
Wm. J. Wright. Finnleton Secretary

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - - **1946 from 30 Apr. 1. 3. & 8. 10. 11**

Total No. of visits **7**

Dates of examination of principal parts—Cylinders **/** Covers **-** Pistons **-** Rods **-** Connecting rods **-** two liners

Crank shaft **-** Flywheel shaft **-** Thrust shaft **-** Intermediate shafts **-** Tube shaft **-** No.

Screw shaft **5** Propeller **4:4:46.** Stern tube **4:4:46.** Engine scatings **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) £ : : :

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

Lloyd's Register Foundation

FRI. 10 MAY 1946

COLL AFTE STE

Committee's Minute Assigned **Transmit to London // + LMC 4.46**