

REPORT ON OIL ENGINE MACHINERY.

No. 131213

19 JUL 1950

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Liverpool

To. in Survey held at Birkenhead Date, First Survey 1st Sept /48 Last Survey 16th June 1950

Reg. Book. Single on the Triple Screw vessel. **BRITISH TRUST** Tons Gross 8640 Net 4933

built at Birkenhead By whom built Cannell, Laird & Co Yard No. 1200 When built 1950

Engines made at Greenock By whom made John G. Kincaid & Co Engine No. K226 When made 1950

Monkey Boilers made at Birkenhead By whom made Cannell, Laird & Co Boiler No. 1200 When made 1950

Indicated Horse Power 3200 Owners British Transport Co. Ltd Port belonging to London

N. Rules as per Rule 625 NHP=490 Is Refrigerating Machinery fitted for cargo purposes to Is Electric Light fitted yes

Trade for which vessel is intended open sea service

MAIN ENGINES, &c. — Type of Engines Diesel (under piston super.) (See Greenock Rpt. to 24081) 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 650 lb Diameter of cylinders 740 1/2 Length of stroke 1500 1/2 No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 115 lb Ahead Firing Order in Cylinders 153624 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 988 1/2

Is there a bearing between each crank yes Revolutions per minute 115

Flywheel dia. 2489 1/2 Weight 24994 lb Moment of inertia of flywheel (16 lbs. in² or Kg.cm.²) 23.53 x 10⁶ Means of ignition Compression Kind of fuel used Diesel

Crank shaft, Solid forged dia. of journals as per Rule as fitted 505 1/4 Crank pin dia. 505 1/4 Crank webs Mid. length breadth 980 1/4 Thickness parallel to axis 310 1/4 Mid. length thickness 310 1/4 Thickness around eye hole 292.5 1/4

Flywheel Shaft, diameter as per Rule as fitted 17 3/4 Intermediate Shafts, diameter as per Rule as fitted 16 Thrust Shaft, diameter at collars as fitted 4.54 1/4

Stern Shaft, diameter as per Rule as fitted 16 Is the tube shaft fitted with a continuous liner yes

Propeller Liners, thickness in way of bushes as per Rule as fitted 13/16 Thickness between bushes as per Rule as fitted 27/32 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 yes

Does the liner do 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 yes

If two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of tube shaft to

If so, state type yes Length of bearing in Stern Bush next to and supporting propeller 5'8"

Propeller, dia. 16'-0" Pitch 11.15 No. of blades 4 Material hang. B9 whether moveable to Total developed surface 88 sq. feet

Moment of inertia of propeller (16 lbs. in² or Kg.cm.²) 106.1 x 10⁶ Kind of damper, if fitted none

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged yes Means of lubrication forced Thickness of cylinder liners 53 1/4 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled yes

Are the exhaust pipes lagged with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ME. FW. 1 Stand. FW. SW (Ballast)

Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Charge Pumps worked from the Main Engines, No. none Diameter 128 Stroke 128 Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and size 2 @ 100 T/hr. 1 @ 200 T/hr How driven steam steam

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

Ballast Pumps, No. and size 1 @ 200 T/hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 ME. 100 T/hr. 1 Stand. 90 T/hr.

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary pumps, No. and size:—In machinery spaces 3-3 1/2 to bilge main, 1-6 direct to bilge pump, 2-4" pump room

Are there independent Power Pump Direct Suctions to the engine room bilges, No. and size 2-6"

Are all the bilge suction pipes in holds and tunnel well 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 to Are they fitted with valves or cocks yes 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 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

Do all pipes pass through the bunkers none How are they protected yes

Do all 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 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 yes

Is the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 7 3/4 3 3/4 stroke 5 1/2 driven by Steam Eng.

Are all Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 7 3/4 3 3/4 stroke 5 1/2 driven by Steam Eng.

Is a provision is made for first charging the air receivers Steam driven aux compressors

Revolving Air Pumps, No. none diameter — stroke — driven by —

Auxiliary Engines crank shafts, diameter as per Rule as fitted 180 1/4 No. 2 Position Station Platform level, 1P. 1S. (Y & R)

Have the auxiliary engines been constructed under special survey yes Is a report sent herewith to. See Rpt 75034

Lloyd's Register

AIR RECEIVERS:—Have they been made under survey... *yes* ✓ State No. of report or certificate... *6696*, *669*
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule... *yes* ✓
 Can the internal surfaces of the receivers be examined and cleaned... *yes* ✓ Is a drain fitted at the lowest part of each receiver... *yes* ✓
Injection Air Receivers, No.... *—* Cubic capacity of each... *—* Internal diameter... *—* thickness... *—*
 Seamless, 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... *70* thickness... *15/16*, ends *1/8*
 Seamless, welded or riveted longitudinal joint... *riveted* Material... *Steel* Range of tensile strength... *shell 29/33 7/10* Working pressure... *26/30 7/10* Actual... *350*

IS A DONKEY BOILER FITTED... *Yes. Two* If so, is a report now forwarded... *Yes* ✓
 Is the donkey boiler intended to be used for domestic purposes only... *No*
PLANS. Are approved plans forwarded herewith for shafting... *Yes* Receivers... *Yes* Separate fuel tanks... *Yes*
 Donkey boilers... *Yes* General pumping arrangements... *Yes* Pumping arrangements in machinery space... *Yes*
 Oil fuel burning arrangements... *Yes*
 Have Torsional Vibration characteristics been approved... *Yes* Date of approval... *17.2.48*

SPARE GEAR.

Has the spare gear required by the Rules been supplied... *Yes* ✓
 State the principal additional spare gear supplied... *Screw shaft: 77901 Ploya's B.H. 1-12-48 G.P. 24-2-50 1200.*

The foregoing is a correct description, **DAMMELL LAIRD AND COMPANY** Manufacturer.

ENGINEERING MANAGER
 Dates of Survey while building: During progress of work in shops... *1/9/48* During erection on board vessel... *16/6/50* Total No. of visits... *259*
 Dates of examination of principal parts—Cylinders... *See General Rpt. to 24081.* Covers... *—* Pistons... *—* Rods... *—* Connecting rods... *—*
 Crank shaft... *24-2-50* Flywheel shaft... *—* Thrust shaft... *—* Intermediate shafts... *3-3-50* Tube shaft... *—*
 Screw shaft... *24-2-50 3-4-50* Propeller... *3-4-50* Stern tube... *3-4-50* Engine scatings... *3-4-50* Engine holding down bolts... *23-5-50*
 Completion of fitting sea connections... *3-4-50* Completion of pumping arrangements... *21-6-50* Engines tried under working conditions... *21/22-6-50*
 Crank shaft, material... *—* Identification mark... *—* Flywheel shaft, material... *—* Identification mark... *—*
 Thrust shaft, material... *—* Identification mark... *—* Intermediate shafts, material... *O.H.M.S.* Identification marks... *68575*
 Tube shaft, material... *—* Identification mark... *—* Screw shaft, material... *O.H.M.S.* Identification mark... *68573*
 Identification marks on air receivers... *6471 and 6510. Ploya's Test 550th, W.P. 350th, 3-3-50 G.P. and 20-3-50 C.W.*
 Welded receivers, state Makers' Name... *—*
 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 Suctioning and Plowere*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo... *Tanker* If so, have the requirements of the Rules been complied with... *Yes* ✓
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with... *Yes* ✓
 Is this machinery duplicate of a previous case... *Yes* If so, state name of vessel... *British Triumph*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under Special Survey in accordance with Approved Plans, the Society's Rules and the Secretary's letters. The materials and workmanship are good. It has been properly installed and tried under working conditions with satisfactory results. It is, in my opinion, eligible for classification with the record of LMC 6,50.*

The amount of Entry Fee... *£ 66 : 13* When applied for... *12 JUL 1950*
 Donkey Boiler Fee... *£ 58 : 15* When received... *19*
 Air Receiver... *£ 16*
 Travelling Expenses (if any) *£ 5 : 13/7*
 Committee's Minute... *LIVERPOOL 18 JUL 1950*
 Assigned... *+ LMC. 6.50. C.L.*
OIL ENGINES.



Certificate (if required) to be sent to... (The Surveyors are requested not to write on or below the space for Committee's Minute.)