

# REPORT ON OIL ENGINE MACHINERY.

No. 75168

Received at London Office 9 MAR 1950

Date of writing Report 4/3/50 19 When handed in at Local Office 7/3/ 1950 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 4-4-49 Last Survey 22-2- 1950  
 Reg. Book. Single on the Triple Quadruple Screw vessel M.V. "Brizist Commander" Tons Gross 8655 Net  
 Built at Glasgow By whom built Harland & Wolff Ltd. Yard No. 13286 When built 1950  
 Engines made at - By whom made - Engine No. 13286 When made 1950  
 Donkey Boilers made at 22/1/50 By whom made - Boiler No. 1598 When made 1949  
 Brake Horse Power 3200 Owners British Tanker Co. Ltd. Port belonging to London  
 I.N. Power as per Rule 696 NHP = 489 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which vessel is intended Ocean Going

**IL ENGINES, &c.**—Type of Engines Heavy Oil Oilless Injection 2 or 4 stroke cycle H Single or double acting Single  
 Maximum pressure in cylinders 659.185 lb/sq. in. Diameter of cylinders 29 1/2" Length of stroke 59 1/2" No. of cylinders 6 No. of cranks 6  
 Indicated Pressure 128.185 lb/sq. in. Ahead Firing Order in Cylinders 1, 5, 3, 6, 2, 4 Span of bearings, adjacent to the crank, measured  
 from inner edge to inner edge 94 1/2" Is there a bearing between each crank Yes Revolutions per minute 115  
 Flywheel Dia. 24 1/2" Weight 2590 lbs. Moment of inertia of flywheel (lbs. in.<sup>2</sup> or Kg. m.<sup>2</sup>) 2358 Means of ignition Comp. Kind of fuel used Diesel Oil  
 Crank pin dia. 5 1/2" Crank webs Mid. length breadth 8 1/2" Mid. length thickness 3 1/2" Thickness parallel to axis 3 1/2" Thickness around eyeholes 2 1/2"  
 Wheel Shaft, diameter as per Rule APPP Intermediate Shafts, diameter as per Rule APPP Thrust Shaft, diameter at collars as fitted 4 1/2"  
 Main Shaft, diameter as per Rule APPP Screw Shaft, diameter as per Rule APPP Is the screw shaft fitted with a continuous liner Yes  
 Liners, thickness in way of bushes as per Rule 2 1/2" Thickness between bushes as per Rule 2 1/2" 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  
 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-  
 erosive 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 tube shaft No If so, state type Length of bearing in Stern Bush next to and supporting propeller 60"  
 Propeller, dia. 15'-6" Pitch 12'-0" No. of blades 4 Material Hardened Steel whether moveable No Total developed surface 75 sq. feet  
 Moment of inertia of propeller (lbs. in.<sup>2</sup> or Kg. m.<sup>2</sup>) 10020 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 declutched Yes Means of  
 lubrication Forced Thickness of cylinder liners 60 1/2" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled  
 lagged with non-conducting material Yes 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. 1 1/2" 140 T/Hr Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
 Bilge Pumps worked from the Main Engines, No. None Diameter Stroke Can one be overhauled while the other is at work  
 Pumps connected to the Main Bilge Line (No. and size 2 Bilge, Duplex 8" x 8 1/2" x 8" 100 T/Hr 1 Bilge, Duplex 9" x 10" x 10" 150 T/Hr  
 How driven 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  
 Blast Pumps, No. and size 1 1/2" 9" x 10" x 10" 2140 T/Hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 1/2" 10" x 10" x 10" 1520 T/Hr  
 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 1 1/2" x 3 1/2" 15" x 3 1/2" 1 1/2" x 3 1/2" 1 1/2" x 2 1/2" 22-32 (various sizes) In pump room  
 Holds, &c.  
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 1/2" x 2 1/2"  
 Are all the bilge suction pipes in holds and tunnel well 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 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 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 bunks None How are they protected  
 What pipes pass through the deep tanks None 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 None worked from  
 Is 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. Two No. of stages Two diameters 280-245 1/2" stroke 130 1/2" driven by Steam  
 Small Auxiliary Air Compressors, No. None No. of stages diameters stroke driven by  
 What provision is made for first charging the air receivers Two Steam driven compressors as above  
 scavenging Air Pumps, No. None (under pump department) diameter stroke driven by  
 Auxiliary Engines crank shafts, diameter as per Rule APPP No. Two diameters 1 1/2" x 2 1/2" x 1 1/2" x 2 1/2" x 1 1/2" x 2 1/2" driven by  
 Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes

23/3/50

5115 002978-002988-0115

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AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of report or certificate *X 194*  
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 *by Rules* *✓*  
Starting Air Receivers, No. *Two* ✓ Total cubic capacity *800 cu ft* Internal diameter *6 8/16"* thickness *1 1/32"*  
Seamless, welded or riveted longitudinal joint *welded* Material *Steel* Range of tensile strength *29.32 1/2* Working pressure *Actual* *35.6*

IS A DONKEY BOILER FITTED *Yes* ✓ 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 *20.3.48* Receivers *APP 8.2.48* Separate fuel tanks *✓*  
(If not, state date of approval)

Donkey boilers *APP 8.2.48* General pumping arrangements *12.3.49* Pumping arrangements in machinery space *29.4.49*

Oil fuel burning arrangements *2.8.49*

Have Torsional Vibration characteristics been approved *Yes (Hydraulic Speed 115 R.P.M.)* Date of approval *20.3.48*

### SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes, and as per attached list*

State the principal additional spare gear supplied *Spare screw shaft and spare C.A. propeller.*

*Lloyd's*  
*S.H. 220A*  
*W.H.*  
*22.3.49*  
*N.C.V.*  
*29.6.49*

The foregoing is a correct description,

**FOR HARLAND AND WOLFF, LIMITED.**

Manufacturer.

Dates of Survey while building  
During progress of work in shops - - *1948 APR. 14-25-27-28. MAY. 2-4-6-11-16-18-20-25-30. JUN. 1-2-6-15-29. JUL. 21-27-28. AUG. 1-2-4-12-23-29-31.*  
During erection on board vessel - - *SEP. 1-7-8-13-14-15-19-21-27-28. OCT. 5-6-10-12-13-17-19-20-24. NOV. 8-27-9-10-14-16-17-22-28-29. DEC. 1-5-7-8-12-14.*  
15-19-21-23-27-28-29. 1950 JAN. 5-11-13-16-18-19-23-25-26-30. FEB. 2-6-12-16-22.

Total No. of visits *86*

Dates of examination of principal parts—Cylinders *18.5.49* Covers *18.5.49* Pistons *1.6.49* Rods *1.6.49* Connecting rods *4.8.49*

Crank shaft *16.5.49* Flywheel shaft *✓* Thrust shaft *11.5.49* Intermediate shafts *21.4.49* Tube shaft *✓*

Screw shaft *16.6.49* Propeller *22.1.49* Stern tube *1.6.49* Engine seatings *26.8.49* Engine holding down bolts *12.1.50*

Completion of fitting sea connections *21.11.49* Completion of pumping arrangements *16.2.50* Engines tried under working conditions *22.2.50*

Crank shaft, material *S.S.* Identification mark *Lloyd's 18918 & 182 marks* Flywheel shaft, material *✓* Identification mark *✓*

Thrust shaft, material *S.S.* Identification mark *Lloyd's 2334* Intermediate shafts, material *Lloyd's 1810* Identification marks *✓*

Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *S.S.* Identification mark *Lloyd's S.H. 221*

Identification marks on air receivers *No 456/4. Lloyd's 101 584185/10. W.P. 356185/10. R.O.B. 10.10.49*

Welded receivers, state Makers' Name *Harland and Wolff Ltd., Belfast*

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 *Water and steam rammer 2x10 30778: 10x2 30778*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *OIL TANKER* ✓ 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 Captain" No 1394*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The machinery which has been constructed under Special Survey in accordance with the Rules.*

*Approved Plans Secretary's letter, has been efficiently secured in position in this vessel, tried*

*under full power conditions satisfactorily.*

*The materials and workmanship are good.*

*Eligible in my opinion to be Classed in The Register Book with record L.M.C 2.50, and*

*notation T.S.C.L. and D.B. working pressure 150 LBS/10. "Bil Engines"*

*Remaining forging reports common to 13989 and 13990 to follow, will be forwarded on completion*

*Approved Plans already forwarded to London with the Rpt 9205 No 101 No 1394 "British Captain"*

The amount of Entry Fee *1/6* ... £ *214* : -

Special ... £ : -

Donkey Boiler Fee *Sec 82 1/4* ... £ : -

Travelling Expenses (if any) £ : -

When applied for *19*

When received *19*

Committee's Minute *GLASGOW - 8 MAR 1950*

Assigned *+ LMC 2.50.*

*208 - 150 lb. Oil Eng.*



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