

REPORT

REPORT ON OIL ENGINE MACHINERY.

No. 46284

NOV 1950

Date of writing Report 30-10-1950 When handed in at Local Office 5-11-1950 Port of Glasgow.
 D.O. Survey held at Glasgow. Date, First Survey 11 April 1949 Last Survey 20 October 1950
 Reg. Book 68642 on the Single Triple Quadruple Screw vessel H.V. "HASHONA"
 Built at Harston Mill-on-Tees By whom built Turners S. B. Co Ltd. Yard No. When built 1944
 Engines made at Govan. By whom made British Polar Engines Ltd. Engine No. E807 When made 1950
 Donkey Boilers made at By whom made Boiler No. When made
 Brake Horse Power 390 Owners Coast Lines Ltd. Port belonging to London.
 M.N. Power as per Rule 101 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which vessel is intended Boasting.

OIL ENGINES, &c. —Type of Engines Heavy Oil Engines H.L. 5 I Type. 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 855 lb/sq. in. Diameter of cylinders 250 in. Length of stroke 420 in. No. of cylinders 5 No. of cranks 5
 Mean Indicated Pressure 101.7 lb/sq. in. Ahead Firing Order in Cylinders 2-3-4-1-5 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 366 in. Is there a bearing between each crank YES Revolutions per minute 300
 Flywheel dia. 1200 in. Weight 3400 lbs. Moment of inertia of flywheel (lbs. in² or Kg. cm.²) 2900 in² Means of ignition COMP Kind of fuel used Diesel
 Crank Shaft, Solid forged dia. of journals as per Rule 170 in. Crank pin dia. 170 in. Crank webs Mid. length breadth 226 in. 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 shaft fitted with a continuous liner
 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 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
 Moment of inertia of propeller (lbs. in² or Kg. cm.²) Kind of damper, if fitted HYDRAULIC
 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 19.5 in. Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled
 Lagged with non-conducting material LACCED 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. ONE Is the sea suction provided with an efficient strainer which can be cleared within the vessel
 Bilge Pumps worked from the Main Engines, No. ONE Diameter 100 in. Stroke 60 in. Can one be overhauled while the other is at work
 Pumps connected to the Main Bilge Line No. and size How driven
 the cooling water led to the bilges 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 Power Driven 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 pumps, No. and size:—In machinery spaces In pump room
 Holds, &c.
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size
 Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes 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
 Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
 Are all pipes pass through the bunkers How are they protected
 Are all 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
 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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from
 Are all wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Are all Air Compressors, No. ONE No. of stages TWO diameters 55 in. 140 in. stroke 240 in. driven by MAIN ENGINE
 Are all Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
 Is provision is made for first charging the air receivers
 Are all Air Pumps, No. ONE diameter 650 in. stroke 240 in. driven by MAIN ENGINE
 Are all Auxiliary Engines crank shafts, diameter as per Rule No. Position
 Are the auxiliary engines been constructed under special survey Is a report sent herewith

76207
AIR RECEIVERS:—Have they been made under survey YES State No. of report or certificate C. 65889
C. 3383

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 by Rules Actual
Seamless, welded or riveted longitudinal joint Material Range of tensile strength Working pressure Actual
Starting Air Receivers, No. TWO Total cubic capacity 30 Cu Ft. Internal diameter 1'-9" thickness 1 3/32" by Rules app.
Seamless, welded or riveted longitudinal joint RIVETED Material M.S. Range of tensile strength 18/30 TT Working pressure Actual 355 lb/sq in.

IS A DONKEY BOILER FITTED ✓ If so, is a report now forwarded
Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for shafting YES Receivers YES Separate fuel tanks
(If not, state date of approval)
Donkey boilers ✓ General pumping arrangements Pumping arrangements in machinery space
Oil fuel burning arrangements
Have Torsional Vibration characteristics been approved NO Date of approval

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES
State the principal additional spare gear supplied

The foregoing is a correct description, Thames & Rye Manufacturer B.P.E. LTD.

Dates of Survey while building
During progress of work in shops - 11/22-4-49, 4.5.49, 9.13.49, 20-5-49, 18-8-50, 15.9-9-50, 11.13.49, 20-10-50
During erection on board vessel -
Total No. of visits Aug 14.
Dates of examination of principal parts—Cylinders 4-5-49 to 22-5-49 Covers 15-8-50 to 27-9-50 Pistons 23-5-49 Rods ✓ Connecting rods 24-10-47
Crank shaft 30-3-49 SCAF. Flywheel shaft 29-4-49 Thrust shaft 2-6-47 Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engine holding down bolts
Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions
Crank shaft, material SIEMENS STEEL Identification mark 422 T.W Flywheel shaft, material SIEMENS STEEL Identification mark 457 W.C.
Thrust shaft, material SIEMENS STEEL Identification mark 615 E.B. Intermediate shafts, material Identification marks
Tube shaft, material Identification mark Screw shaft, material Identification mark
Identification marks on air receivers Lloyd's No 3383 OJT. 14-10-49. Lloyd's No 65889 A.R.S. 19-5-48

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
Description of fire extinguishing apparatus fitted
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 ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) This engine has been built under Special Survey in accordance with the Secretary's letter and approved plans. The materials and workmanship are good and on completion, the engine was tried on the test bed at the makers works with satisfactory results. It is now being dispatched to South Africa to be fitted as replace engine for M.V. 'MASHONA' and is eligible in my opinion for the record of L.M.C. (with date) when efficiently installed on board, subject to the torsional vibration characteristics being approved.

The amount of Entry Fee 3/6 FEE £ 27 : 0 :
Special ... £ : : When applied for 19
Donkey Boiler Fee... £ : : When received 19
Travelling Expenses (if any) £ : :
Committee's Minute GLASGOW 8-NOV 1950
Assigned Deferred for comp.

A. G. Smith
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation