

REPORT ON OIL ENGINE MACHINERY.

No.

123578

124211

Date of writing Report 25/11/1951 When handed in at Local Office 28/11/1951 Port of Stanford
 No. in Reg. Book. Stanford Date, First Survey 2/10/51 Last Survey 9/10/1951
 Single on the Triple Screw vessel. Motor Launch "SWALLOW C." Number of Visits 3
 Built at Wivenhoe By whom built James W Cook (Wivenhoe) Ltd. Yard No. 1063 When built 10/51
 Engines made at Stanford By whom made Blackstone & Co Ltd. Engine No. 49131 When made 10/51
 Donkey Boilers made at Stanford By whom made Blackstone & Co Ltd. Boiler No. 49131 When made 10/51
 Brake Horse Power 180 Owners Blackstone & Co Ltd. Port belonging to Blackstone & Co Ltd.
 M.N. Power as per Rule 32 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
 Trade for which vessel is intended Is Refrigerating Machinery fitted for cargo purposes

IL ENGINES, &c. — Type of Engines EVMGR. 4. 2 or 4 stroke cycle 4 Single or double acting Simple
 Maximum pressure in cylinders 800 lb. Diameter of cylinders 8 3/4" Length of stroke 11 1/2" No. of cylinders 4 No. of cranks 4
 Mean Indicated Pressure 108 lb. Ahead Firing Order in Cylinders 1. 2. 4. 3. Span of bearings, adjacent to the crank, measured from inner edge to inner edge 10 1/16" Is there a bearing between each crank Yes Revolutions per minute 600
 Flywheel dia. 40" Weight 2200 lb. Moment of inertia of flywheel (lbs. in² or Kg. cm.²) 566000 Means of ignition Compression Kind of fuel used Diesel
 Crank Shaft, Solid forged dia. of journals as per Rule as approved Crank pin dia. 6 3/4" Crank webs 4 1/4" Mid. length breadth 2 3/32" Thickness parallel to axis as fitted
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted
 Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner No
 Bronze 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 propeller boss No
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner No
 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 No
 If two liners are fitted, is the shaft lapped or protected between the liners No Is an approved Oil Gland or other appliance fitted at the after end of tube shaft No
 If so, state type No Length of bearing in Stern Bush next to and supporting propeller 19 1/2"
 Propeller, dia. 19 1/2" Pitch 19 1/2" No. of blades 3 Material Steel whether moveable No Total developed surface 1.160 sq. feet
 Moment of inertia of propeller (lbs. in² or Kg. cm.²) 1.160 Kind of damper, if fitted No
 Method of reversing Engines S.M. GEAR Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Lubricated Thickness of cylinder liners 19/32" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled Yes
 Lagged with non-conducting material No If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine No
 Cooling Water Pumps, No. 2 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. 2 Diameter 2" Stroke 2" Can one be overhauled while the other is at work Yes
 Pumps connected to the Main Bilge Line (No. and size 2" How driven Electric
 Is the cooling water led to the bilges Yes If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements No
 Ballast Pumps, No. and size 2" Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 Supply 810 GPH. 1 Scavenge 1160 GPH.
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary Yes
 Bilge pumps, No. and size:—In machinery spaces 2" In pump room 2"
 In holds, &c. 2"
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2"
 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 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 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
 That pipes pass through the bunkers Yes How are they protected By covers
 That pipes pass through the deep tanks Yes 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 Inside
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork No
 Main Air Compressors, No. 1 No. of stages 1 diameters 1 1/8" stroke 2" driven by Electric
 Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 1 1/8" stroke 2" driven by Electric
 Small Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 1 1/8" stroke 2" driven by Electric
 That provision is made for first charging the air receivers Yes
 Scavenging Air Pumps, No. 1 diameter 2" stroke 2" driven by Electric
 Auxiliary Engines crank shafts, diameter as per Rule No. 1 Position Vertical
 Have the auxiliary engines been constructed under Official survey Yes a report sent herewith Yes

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C. 11219.
C. 11249.
C. 11255. } *Buffield*
Certificate

AIR RECEIVERS:—Have they been made under survey *Yes.* State No. of report or certificate
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. 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. *3* Total cubic capacity *15 cu. ft.* Internal diameter *17 3/8"* thickness *5/16"* Actual
Seamless, welded or riveted longitudinal joint *Welded* Material *Steel* Range of tensile strength Working pressure by Rules Actual *300 lps.*

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 *7/8/47.* Receivers 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 *To be submitted* Date of approval
SPARE GEAR.
Has the spare gear required by the Rules been supplied *Yes.*
State the principal additional spare gear supplied *Spare gear list attached.*

The foregoing is a correct description,
BLACKSTONE & CO. LTD. *R. G. G. G.* Manufacturer.
Dates of Survey while building During progress of work in shops - *2/10/51. 9/10/51.*
During erection on board vessel - *20/12/50*
Total No. of visits *2 In Shops.*
Dates of examination of principal parts—Cylinders *2/10/51* Covers *2/10/51* Pistons *2/10/51* Rods Connecting rods *2/10/51*
Crank shaft *20/12/50* Flywheel shaft Thrust shaft Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engine holding down bolts *2/10/51*
Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions *2/10/51*
Crank shaft, material *S.M. Steel* Identification mark *JBT. 1695* 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 *20135/34 GS. 12/2/51. 20135/34 JS. 2/12/51. 20135/40 JS. 2/12/51.*

Welded receivers, state Makers' Name *L. Jenkins & Co. Ltd.*
Is the flash point of the oil to be used over 150°F
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 survey in accordance with plans approved and the requirements of the rules. Steel used in the manufacture has been made at works approved by the Comm., the area tested in the presence of the Society's Surveyor. The engine has been tested at the makers works on full load & 10% overload with satisfactory results, the workmanship is good, and the engine is in my opinion, eligible to be fitted in a classed ship. The S.M. reverse reduction gear box No 10898 supplied by Modern Wheel Drive and intended for installation with this engine was not run with the engine on 9/10/51.*

The amount of Entry Fee *3 s. 6 d.* £ *13 : 6/8*
Special ... £ : When applied for *28/11/51*
Donkey Boiler Fee... £ : When received *19*
Travelling Expenses (if any) £ *3*
FRIDAY 17 JUL 1953
Assigned *Sae F.E. Welch rpt.*
Committee's Minute
Engineer Surveyor to Lloyd's Register of Shipping. *L. Potts*

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