

REPORT ON OIL ENGINE MACHINERY.

No. 7631.
27 MAY 1948

Writing Report 20th May, 1948 When entered in at Local Office 21st May, 1948 Port of Singapore.

Survey Made at Singapore (Tanjong Pagar) Date, First Survey 25/10/47 Last Survey 22nd April, 1948

6 on the Tugboat "NORVEST" Number of Visits 7 Gross 149.28 Tons Net 76.87

Frederikstad - Norway. By whom built Off Sankelens Pukked. Yard No. 32 When built 1946

is made at Stamford. By whom made Blackstone & Co. Ltd. Engine No. 46356 When made 1946

Boilers made at None By whom made Port belonging to Singapore.

Horse Power 160 @ 600 r.p.m. Owners Shell Co. of Straits Settlements, Ltd. Boiler No. When made

power as per Rule 30 (M.I.P. not known) Is Refrigerating Machinery fitted for cargo purposes. No. Is Electric Light fitted Yes.

for which vessel is intended "Carrying Petroleum in bulk." "Service (boasting) in Malay and East Indian Archipelago."

Engines, etc. - List of Engines - List of Blackstone Marine Engine 3 or 4 strokes cycle 4 Stroke or double acting S.A.

as pressure in cylinders 730 lbs/sq. in. Diameter of cylinders 8 3/4" Length of stroke 11 1/2" No. of cylinders 4 No. of cranks 4

Indicated Pressure 28 1/2" Mean Piston Order in Cylinders 1, 2, 4, 3 Span of bearings, adjacent to the crank, measured

inner edge to inner edge 3 1/2" Is there a bearing between each crank Yes Revolutions per minute 600

Weight 1543 lbs. Diameter of journals 5 3/4" Crank web 8" Kind of fuel used Diesel.

Solid forged dia. of journals 5 3/4" Crank pin dia. 5 3/4" Thrust Shaft, diameter of collars 5 1/4"

Shaft, diameter as per Rule 4 1/2" Is the tube shaft fitted with a continuous liner Solid BRONZE

Liners, thickness in day of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in 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-

va 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

tube shaft Yes If so, shaft type Swank (?) Length of bearing in Stern Bush next to and supporting propeller 23 1/2"

her, dia 5 1/4" Pitch 48" No. of blades 3 Material BRONZE whether moveable No. Total developed surface 8 1/2 sq. feet

of inertia of propeller (10 lbs. in. or Kg. cm.?) Kind of damper, if fitted None

of reversing mechanism gear & clutch Is a governor or other arrangement fitted to prevent racing of the engine when decelerated Yes

tion Force Thickness of cylinder liners Are the cylinders fitted with safety valves Yes Are the exhaust pipes and steam pipes water cooled

ed with non-conducting material. cooling If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being siphoned

the engine R.V. Cooling Water Pumps, No. One In the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Pumps worked from the Main Engines, No. One Diameter 2" Stroke 4" Can one be overhauled while the other is at work Yes.

connected to the Main Engines One portable pump on deck (Pilot driven salvage pump); one hand pump to

cooling water fed to the bilges. No. E. R. ; Hand pumps to other spaces other than cargo tanks.

ements None. bargo pumps driven by main engine only.

Pumps, No. and size None Power Driven Lubricating Oil Pumps, including spare pump, No. and size One embodied in engine

E & COOLING WATER PUMPS ARE INTERCHANGEABLE No. Suctions, connected to both main bilge pumps and machinery

in independent means arranged for circulating water through the Oil Cooler. ME 2"; HAND PUMP 2 1/2"; SALVAGE PUMP. Is pump room None (on deck)

pumps, No. and size: In machinery spaces PERKS, CHRYNACKER, COFFERDAMS - 1 1/2"

Is, &c. Independent Power Pump Direct Suctions to the engine room bilges, No. and size Salvage Pump only.

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

ble mud-boxes, placed above the level of the working floor, with straight run pipes to the bilges. No.

Sea Connections fitted direct on the skin of the Ship. Yes. Are they fitted with valves or cocks. Valves. Are they faced

ntly high on the ship's side to be seen without lifting the platform plates. No. Are the overboard discharges above or below the deep water line. Above.

ey each fitted with a discharge valve always accessible on the plating of the vessel. Yes. Are the blow-off cocks fitted with a spiral and brass covering plate. None.

pipes pass through the bulkheads. None. How are they protected. Have they been tested as per Rule. Yes.

pipes pass through the deep tanks. Have they been tested as per Rule. Yes.

pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times. None.

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

or from one compartment to another. Yes. Is the shaft tunnel watertight. None. Is it fitted with a watertight door. Yes. worked from.

od vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork. Yes.

Air Compressors, No. One. No. of stages. 1. diameters 1.5" stroke 2" driven by Main motor

ary Air Compressors, No. None. No. of stages. diameters stroke driven by

Auxiliary Air Compressors, No. One Foot pump for first charging only. stroke driven by

provision is made for first charging the air receivers. Foot pump as above.

ging Air Pumps, No. None. diameter stroke driven by

ary Engines crank shafts, diameter as per Rule. No. Position. Is a report sent herewith. No.

the auxiliary engines been constructed under special survey. No.

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AIR RECEIVERS:—Have they been made under survey. *Po.* ✓ State No. of report or certificate. ✓
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. *Po.* ✓ 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. *Three* ✓ Total cubic capacity. *15.0 cu. ft.* Internal diameter. *18"* thickness. *5/16"* Actual. ✓
Seamless, welded or riveted longitudinal joint. *Seamless* Material. *Steel* Range of tensile strength. *24/30* Working pressure. *Actual.* *39.5 lbs.* ✓

IS A DONKEY BOILER FITTED. *Po.* ✓ 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. *Po.* ✓
(If not, state date of approval)
Donkey boilers. *Po.* ✓ General pumping arrangements. *Yes.* ✓ Pumping arrangements in machinery space. *Yes.* ✓
Oil fuel burning arrangements. *Po.* ✓
Have Torsional Vibration characteristics been approved. *Not known.* ✓ Date of approval. ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied. *Yes. (For vessels engaged on short voyages)* ✓
State the principal additional spare gear supplied. *List attached hereto.* ✓
Note:—The only auxiliary or independent machine on board this vessel is a "WITTE DIESELECTRIC" generating set (Spec 1206, Diam 3.25, Stroke 4.50) with attached generator (110-125 Volt, 21 AMP) Pending the decision of the Committee regarding the fitting, or otherwise, of independent pumps etc., a Final Entry Report on the Electrical Installation has not been prepared. It will be necessary to install new generators if extra power for pumps etc. is required.
The foregoing is a correct description, ✓

Manufacturer.

Dates of Survey while building } During progress of work in shops - - } *Does not apply.*
During erection on board vessel - - }
Total No. of visits. ✓
Dates of examination of principal parts—Cylinders. ✓ Covers. ✓ Pistons. ✓ Rods. ✓ Connecting rods. ✓
Crank shaft. ✓ Flywheel shaft. ✓ Thrust shaft. ✓ 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. ✓ 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. *25/10/47* Identification mark. ✓
Identification marks on air receivers. *RETEST 790 LBS. 4/3/48. J.W.*

Welded receivers, state Makers' Name. *Blackstone & Co. Ltd (or Contractors).* ✓
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. *Hand extinguishers only.* ✓
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. ✓
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with. *Po.* ✓
Is this machinery duplicate of a previous case. *Not known.* ✓ If so, state name of vessel. ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been generally examined and opened up only as far as required to verify particularly required for this report. (See Secretary's letter 3/11/47) The air receivers have been opened, examined, cleaned and tested hydraulically to 790 lbs/10". The screw shaft has been drawn out, examined and refitted. The oil retaining appliance has been overhauled. The machinery has been examined under running conditions, the pumps and pumping arrangements have been tested. In my opinion, the machinery of this vessel is eligible to have the records of L.M.C. (with date as previously recommended) and T.S. (Sun) 10.4.47 when all requirements for classification have been completed to the satisfaction of the Committee.*

The amount of Entry Fee ... £ :
Special ... *\$120* :
Donkey Boiler Fee ... :
Travelling Expenses (if any) *\$20* :
(See Report 9.)
When applied for *21/5/48*
When received

FRI. 6 AUG 1948

Committee's Minute

Assigned

See minute on Vol. 9

John Wormald.
Engineer Surveyor to Lloyd's Register of Shipping.



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