

REPORT ON OIL ENGINE MACHINERY.

No. 35490^B

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of writing Report 27-9-1952 When handed in at Local Office 19 Port of Rotterdam
 Survey held at Slidrecht, Hindredyk Date, First Survey 19-5-52 Last Survey 25-8-1952
 Book. Number of Visits 7
 253 on the Single Screw vessel M.V. "Bettet" Tons Gross 194.34
Triple Net 75.55
Quadruple
 at Slidrecht By whom built Messrs "De Klop" Yard No. C.O. 182 When built 1952
 Names made at Amsterdam By whom made Werkspoor N.V. Engine No. 1333 When made 1952
 Boilers made at — By whom made — Boiler No. — When made —
 Horse Power 430 Owners Indonesian Government Port belonging to Bjakarta
 Power as per Rule 86 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 for which vessel is intended Service in Indonesian Archipelago

ENGINES, &c. — Type of Engines Please see Amst. rpt No 18270 or 4 stroke cycle — Single or double acting —
 Maximum pressure in cylinders — Diameter of cylinders — Length of stroke — No. of cylinders — No. of cranks —
 Indicated Pressure — Ahead Firing Order in Cylinders — Span of bearings, adjacent to the crank, measured
 from inner edge to inner edge — Is there a bearing between each crank — Revolutions per minute —
 Wheel dia. — Weight — Moment of inertia of flywheel (lbs. in² or Kg. cm²) — Means of ignition — Kind of fuel used —
 (Solid forged) dia. of journals — as per Rule — Crank pin dia. — Crank webs — Mid. length breadth — Thickness parallel to axis —
 (Semi built) dia. — as fitted — Mid. length thickness — shrunk — Thickness around eye-hole —
 (All built) —
 Main Shaft, diameter — as per Rule — Intermediate Shafts, diameter — as per Rule — Thrust Shaft, diameter at collars — as fitted —
 as fitted — as fitted — as per Rule —
 Shaft, diameter — as per Rule — Screw Shaft, diameter — as per Rule — Is the tube shaft fitted with a continuous liner —
 as fitted — as fitted — as fitted — screw —
 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
 liner boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —
 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-
 flammable — 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 No If so, state type — Length of bearing in Stern Bush next to and supporting propeller —
 Propeller, dia. 15.5 Pitch 11.5 No. of blades 4 Material bronze whether moveable Solid Total developed surface 63 sq. feet
 Moment of inertia of propeller (lbs. in² or Kg. cm²) — Kind of damper, if fitted —
 Method of reversing Engines — Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of
 operation — Thickness of cylinder liners — Are the cylinders fitted with safety valves — Are the exhaust pipes and silencers water cooled
 and lined with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
 into the engine — Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —
 Pumps connected to the Main Bilge Line { No. and size 1 a 16 T/h 1 a 30 T/h 1-2" hand pump
 How driven Main engine Electric drive
 Is 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 —
 Oil Pumps, No. and size One 30 T/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 a 4.5 T/h 1 a 4.8 T/h
 Are there 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 1 a 20 T/h 1 a 65 T/h 2 a 50 T/h In pump room —
 Suctions, &c. crosspieces 5 a 50 T/h
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 a 20 T/h
 Are 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
 Sea Connections fitted direct on the skin of the Ship on bronze Are they fitted with valves or cocks valves 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 —
 Are pipes pass through the bunkers None How are they protected —
 Are 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 an 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 no tunnel Is it fitted with a watertight door — worked from —
 On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork —
 Air Compressors, No. — No. of stages — diameters — stroke — driven by —
 Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 90/110 T/h stroke 85 T/h driven by Main engine
 Auxiliary Air Compressors, No. — No. of stages — diameters — stroke — driven by —
 Is provision made for first charging the air receivers Auxiliary engine hand started
 Charging Air Pumps, No. — diameter — stroke — driven by —
 Auxiliary Engines crank shafts, diameter — as per Rule — No. One Hollandant 4-12.635 30 RHP
 as fitted — Position port side in hold
 Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Copy certificate

26-11-52

AIR RECEIVERS:—Have they been made under survey... *Yes* State No. of report or certificate... *Sheffield C 91*
 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. *2* Total cubic capacity... *1200 lbs* Internal diameter... *49 1/2* thickness... *9.5*
 Seamless, welded or riveted longitudinal joint... *Seamless* Material... *S.M. steel* Range of tensile strength... *60,000 kg/cm²* Working pressure... *30 kg/cm²*

IS A DONKEY BOILER FITTED... *No* 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... *20-3-52* Receivers... *20-3-52* Separate fuel tanks...
 Donkey boilers... General pumping arrangements... *23-4-52* Pumping arrangements in machinery space... *23-4-52*
 Oil fuel burning arrangements...
 Have Torsional Vibration characteristics been approved... *Yes* Date of approval... *25-3-52*

SPARE GEAR.

Has the spare gear required by the Rules been supplied... *Yes*
 State the principal additional spare gear supplied... *Spare screwshaft, spare bronze propeller.*

The foregoing is a correct description... *L. SMIT & ZOON'S*
Scheeps & Werktuigbouw N.V. Manufacturer.

Dates of Survey while building: During progress of work in shops...
 During erection on board vessel... *1952: May 19, June 4, July 5-24-29, August 20-25*
 Total No. of visits... *7*
 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... *7-4-52* Stern tube... *fitted 19-5-52* Engine seatings... *19-5-52* Engine holding down bolts... *24-4-52*
 Completion of fitting sea connections... *19-5-52* Completion of pumping arrangements... *20-8-52* Engines tried under working conditions... *25-8-52*
 Crank shaft, material... Identification mark... Flywheel shaft, material... Identification mark...
 Thrust shaft, material... Identification mark... *LLOYD'S N° 8512* Intermediate shafts, material... Identification marks... *LLOYD'S N° 755*
 Tube shaft, material... Identification mark... Screw shaft, material... Identification mark... *LLOYD'S N° 74*
 Identification marks on air receivers... *N° 906097-906099 LLOYD'S TEST 60KG WP 30KG R.R. 13-6-49*

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... *3-2 gallon foam type extinguisher, 1 Pyrene gun, 1 fire hose, nozzle*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo... *No* 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... *M.V. Bango*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed and fitted under Special Survey in accordance with the approved plans, Society's Rules and Secretary's letter. Materials have been tested as required and the workmanship found good. The machinery has been tried under full working conditions and was found in good working and manoeuvring order. In my opinion this vessel's machinery merits the approval of the Committee to be recorded in the Society's Register Book with the notation of +LMC. P-52. Oil Engines. E.C.

The amount of Entry Fee... *£16.1-*
 Special ...
 Donkey Boiler Fee...
 Travelling Expenses (if any) *£18.50*
 When applied for... *7/11 1952*
 When received... *19*

S. M. Doudet
 Engineer-Surveyor to Lloyd's Register of Shipping

TUES. 6 JAN 1953

Assigned... *+LMC 9.52 Oil Eng.*
CL



MA. X. Ban
14.11.52

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