

## REPORT ON OIL ENGINE MACHINERY.

No. 10634

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e of writing Report 90-9 1952 When handed in at Local Office

19 Port of

in Survey held at Amsterdam

Date, First Survey 13-7-1948

Last Survey 27-8 1952

Book.

Number of Visits

Single  
on the Twin  
Triple  
Quadruple  
Screw vessel

M.V. BLIBIS

Tons

Gross

Net

Built at Hendrik Jan Russell By whom built Junker &amp; Stans.

Yard No. 270 When built 1952

Engines made at Amsterdam By whom made Werkspoor N.V.

Engine No. 1458 When made 1952

Key Boilers made at By whom made

Boiler No. When made

Horse Power 430

Owners Republik Indonesia

Port belonging to Jakarta

N. Power as per Rule 86

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ade for which vessel is intended Indonesian Archipelago.

ENGINES, &amp;c. Type of Engines T.M.A.S. 176

2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 270 mm Length of stroke 500 mm No. of cylinders 6 No. of cranks 6Mean Indicated Pressure 7.5 kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1-3-5-6-4-2 Span of bearings, adjacent to the crank, measured

mm inner edge to inner edge 320 mm Is there a bearing between each crank Yes Revolutions per minute 375

Flywheel dia 1140 mm Weight 1250 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 1.57 x 10<sup>6</sup> Means of ignition Comp. Kind of fuel used Diesel oilCrank pin dia 100 mm Crank webs Mid. length breadth 340 mm Thickness parallel to axis 2 mm  
Crank webs Mid. length thickness 81 mm Thickness around eye hole 2 mm

Flywheel Shaft, diameter as per Rule 190 mm Thrust Shaft, diameter at collars as per Rule 145 mm

Screw Shaft, diameter as per Rule 177.5 mm Is the (tube screw) shaft fitted with a continuous liner Yes

Liners, thickness in way of bushes as per Rule 14 mm Thickness between bushes as per Rule 11 mm 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 One length

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 800 mm

Propeller, dia Pitch No. of blades Material whether moveable Total developed surface sq. feet

Moment of inertia of propeller (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) Kind of damper, if fitted

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 21 mm 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

Suction to the engine Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 1 Diameter 130 mm Stroke 75 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and size How driven

If 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 104.5 t.p.h.

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both main bilge pumps and auxiliary

ge pumps, No. and size:—In machinery spaces In pump room

holds, &amp;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

How are they protected

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

If 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. 1 No. of stages 1 diameters 100/120 mm stroke 90 mm driven by M. Engine

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

What provision is made for first charging the air receivers

Savenging Air Pumps, No. diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule No. Position

Have the auxiliary engines been constructed under special survey Is a report sent herewith



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AIR RECEIVERS:—Have they been made under survey *Yes* State No. of report or certificate *D.F. No. 1528/154*

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. *1* Total cubic capacity *1240 h* Internal diameter *498 mm* thickness *11.5 mm*

Seamless, welded or riveted longitudinal joint *Seamless* Material *SM steel* Range of tensile strength *35.1-52.2 kg/cm<sup>2</sup>* Working pressure *3.0-5.0*

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 *10-3-53* Receivers *10-3-53* Separate fuel tanks *—*

Donkey boilers *—* General pumping arrangements *—* Pumping arrangements in machinery space *—*

Oil fuel burning arrangements *—*

Have Torsional Vibration characteristics been approved *Yes* Date of approval *10-3-53*

### SPARE GEAR.

Has the spare gear required by the Rules been supplied *—*

State the principal additional spare gear supplied *—*

### WERKSPOOR N.V.

The foregoing is a correct description, *—* Manufacturer *—*

Dates of Survey while building *—* During progress of work in shops *1952 Jan 24-25-29 Feb 7 March 18-24 Apr. 4-5-25 May 9-17 June 23 July 28-29*

Dates of examination of principal parts—Cylinders *24/25-1* Covers *18/3* Pistons *25/4* Rods *—* Connecting rods *29/1*

Crank shaft *5/4* Flywheel shaft *—* Thrust shaft *13/7* 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 *SM steel* Identification mark *KH 44-52* Flywheel shaft, material *—* Identification mark *—*

Thrust shaft, material *SM steel* Identification mark *KH 13-7-48* Intermediate shafts, material *—* Identification marks *—*

Tube shaft, material *—* Identification mark *—* Screw shaft, material *—* Identification mark *—*

Identification marks on air receivers *No. 13/1 Plogas Test to atm. W.P. 30 atm. H.S. 15/6-51 — No. 6/1 Plogas Test to atm. W.P. 30 H.S. 15/6-51.*

Welded receivers, state Makers' Name *Mess Rheinische Röhrenwerke A.G. Werk Dinslaken-Purmerfeld.*

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*

*Special Survey in accordance with approved plan and Society's*

*material tested as required and workmanship found good.*

*The engine has been tested on makers test bench under full load conditions*

*found satisfactory. The engine has been shipped to*

*In my opinion the vessel for which this engine is intended will be*

*eligible for the notation of \* L.M.C. (with date) when the whole*

*machinery has been fitted satisfactory on board and tried under*

*full working condition. Copy certificates of crankshaft, thrustshaft*

*int. shafting, screw shafts and air receivers attached.*

The amount of Entry Fee *1/3 x 86 x 75.60 = £321.00*

Special *—* When applied for *17/12 1952*

Donkey Boiler Fee *—* When received *19*

Travelling Expenses (if any) *17.-*

Committee's Minute *THURSDAY - 3 SEP 1953*

Assigned *See F.E. mchly rpt* *See Dja Rpt.*

Engineer Surveyor to Lloyd's Register of Shipping.  
Lloyd's Register Foundation