

# REPORT ON OIL ENGINE MACHINERY.

No. 18563

Received at London Office

19 NOV 1952

Writing Report 10-11 1952 When handed in at Local Office 19 Port of Amst

Survey held at Amsterdam Date, First Survey 28-2-1951 Last Survey 27-9 1952  
Number of Visits 17

Single on the Twin Triple Quadruple Screw vessel M.S. MINGKARA Tons Gross \_\_\_\_\_ Net \_\_\_\_\_

By whom built Messrs G. & J. van der Meer Yard No. 927 When built 1952

By whom made Messrs. Werkspoor N.V. Engine No. 51440 When made 1952

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_

Horse Power 2 x 580 Owners Republik Indonesia Port belonging to Batavia

Power as per Rule 2 x 116 = 232 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

For which vessel is intended Leasing

Engines, &c. Type of Engines TMAS 278 2 or 4 stroke cycle 4 Single or double acting Single

Mean pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 270 mm Length of stroke 500 mm No. of cylinders 2 No. of cranks 2

Indicated Pressure 7.5 kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1-4-7-6-8-5-2-3 Span of bearings, adjacent to the crank, measured inner edge to inner edge 220 mm Is there a bearing between each crank Yes Revolutions per minute 275

Cell dia. 1120 mm Weight 1250 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>) 25,750 Means of ignition Comp. Kind of fuel used Diesel

Solid forged dia. of journals as per Rule 222 mm Crank pin dia. 222 mm Crank webs Mid. length breadth 240 mm Thickness parallel to axis \_\_\_\_\_ shrunk Thickness around eye-hole \_\_\_\_\_

Intermediate Shafts, diameter as per Rule 120 mm Thrust Shaft, diameter at collars as fitted 92 mm

Screw Shaft, diameter as per Rule 135 mm Is the tube shaft fitted with a continuous liner Yes

Liners, thickness in way of bushes as per Rule 12.5 mm Thickness between bushes as fitted 10 mm 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 Yes

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-conductive 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 tube shaft No 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. in<sup>2</sup> or Kg.cm.<sup>2</sup>) \_\_\_\_\_ Kind of damper, if fitted No

Kind of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of gears

Thickness of cylinder liners 22 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled Yes

Are the exhaust pipes and silencers water cooled with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned the engine \_\_\_\_\_

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

Pumps worked from the Main Engines, No. each eng. Diameter 130 Stroke 75 Can one be overhauled while the other is at work Yes

connected to the Main Bilge Line (No. and size \_\_\_\_\_ How driven \_\_\_\_\_)

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 \_\_\_\_\_

Pumps, No. and size \_\_\_\_\_ Power Driven Lubricating Oil Pumps, including spare pump, No. and size Rotating, 4, 200 l/h

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 \_\_\_\_\_

Other pumps, &c. \_\_\_\_\_

Independent Power Pump Direct Suctions to the engine room bilges, No. and size \_\_\_\_\_

Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes \_\_\_\_\_ Are the bilge suction pipes 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 \_\_\_\_\_

Sea Connections fitted direct on the skin of the Ship \_\_\_\_\_ Are they fitted with valves or cocks \_\_\_\_\_ Are they fixed \_\_\_\_\_

Are they 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 the pipes pass through the bunks \_\_\_\_\_ How are they protected \_\_\_\_\_

Are the pipes pass through the deep tanks \_\_\_\_\_ Have they been tested as per Rule \_\_\_\_\_

Are the pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_

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 \_\_\_\_\_ Is the shaft tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

On a wooden vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork \_\_\_\_\_

Air Compressors, No. each eng. No. of stages 2 diameters 100/120 mm stroke 90 mm driven by main engine

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

Provision is made for first charging the air receivers \_\_\_\_\_

Refrigerating 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 \_\_\_\_\_

JM  
21/11/52



4B 18563.

AIR RECEIVERS: - Have they been made under survey *Yes* State No. of report or certificate *Sheffield 18563*  
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 *18000* Internal diameter *496 mm* thickness *9.5 mm*  
Seamless, welded or riveted longitudinal joint *Material: S.M. Steel* Range of tensile strength *61.8-62* Working pressure *Actual*

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 *✓* Receivers *✓* Separate fuel tank *✓*  
(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 *Yes* Date of approval *28-7-52*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*  
State the principal additional spare gear supplied *✓*

WERKSPOR N.V.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops - *1951 28/2 5/3 24/3 19/6 4/7 28/9 15/10; 1952 17/1 15/4 22/4 6/5 24/6 25/6 27/6 18/8 27/9*  
During erection on board vessel -  
Total No. of visits *17*

Dates of examination of principal parts - Cylinders *19/6 4/7 1952* Covers *24/3 6/5 1952* Pistons *15/6 17/5 52* Rods *✓* Connecting rods *✓*  
Crank shaft *5/3 51 26/6 51* Flywheel shaft *✓* Thrust shaft *25 27/6 52* 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 *22/4*  
Crank shaft, material *S.M. Steel* Identification mark *LLOYD'S NO 13080 KK 5-4-51* Flywheel shaft, material *✓* Identification mark *✓*  
Thrust shaft, material *S.M. Steel* Identification mark *LLOYD'S NO 13500 AVB 30-6-51* Intermediate shafts, material *S.M. Steel* Identification marks *LLOYD'S NO 13500 KK 15-5-51*  
Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *S.M. Steel* Identification mark *LLOYD'S NO 13500 KK 15-5-51*  
Identification marks on air receivers *See Cert.*

Welded receivers, state Makers' Name *✓*  
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 *Yes* If so, state name of vessel *de Waal "Jan P. 162" Verschuik "Jan P." 185.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *These engines have been built in accordance with approved plans, Society's Rules & Secretarial letters. All materials have been tested as required & the workmanship found good. The engines have been tested under full load condition on moor testbeds and found working satisfactorily. In my opinion the vessel for which these engines are intended will be eligible for a notation + LMC with date when fitted & examined on board. Copy certificates of crankshaft, thrust-, tail- and intermediate shafts and starting air vessels attached.*

The amount of Fee *1,22 x 2/3 x 116 x 5.60 = 520.-*  
Special ... £ : : When applied for *14-11 1952*  
Donkey Boiler Fee... £ : : When received *19*

*J. H. ...*  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *FRI. 19 JUN 1953*

Assigned *See F. E. ...*

