

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 40951 B  
5-MAR 1956

Received at London Office

Date of writing Report 27-1-1956 When handed in at Local Office 19 Port of Rotterdam

No. in Reg. Book. 35099 Survey held at Kaltbommel Date, First Survey 1-6-1954 Last Survey 4-1-1956  
Number of Visits 11

Single on the Twin Screw vessel m/v "GILIRADJA" Tons Gross 1012.51 Net 449.33

Built at Kaltbommel By whom built Scheepwerf, De Waal N.V. Yard No. 652 When built 1956

Engines made at Amsterdam By whom made Morris Werkspoor N.V. Engine No. 1797 When made 1954

Donkey Boilers made at - By whom made - Boiler No. - When made -

Brake Horse Power { Maximum - Service 1380 Owners Indonesian Government Port belonging to Kalianget

M.N. as per Rule 276 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Ocean going

OIL ENGINES, &c. - Type of Engines T.M.A.S 3910 (ans. 3/1 19991) 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 390 m.m. Length of stroke 600 m.m. No. of cylinders 10 No. of cranks 10

Mean Indicated Pressure 6.84 kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 492 m.m. Is there a bearing between each crank yes Revolutions per minute { Maximum - Service 275

Flywheel dia. 1500 m.m. Weight 1240 kg. Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. m<sup>2</sup>) 5120 Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, { Solid forged as per Rule affe. dia. of journals as fitted 310 Crank pin dia. 200 m.m. Crank webs 155 m.m. central hole Mid. length breadth 700 m.m. Thickness parallel to axis - All built as fitted 310 Mid. length thickness 125 m.m. Thickness around eye-hole -

Flywheel Shaft, diameter as per Rule affe. Intermediate Shafts, diameter as per Rule affe. Thrust Shaft, diameter at collars as per Rule affe.

Tube Shaft, diameter as per Rule affe. Screw Shaft, diameter as per Rule affe. Is the { tube screw } shaft fitted with a continuous liner { no }

Bronze Liners, thickness in way of bushes as per Rule affe. Thickness between bushes as per Rule affe. Is the after end of the liner made watertight in the propeller boss -

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -

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 fitted at the after end of stern tube yes If so, state type Van Dam patent

Length of bearing in Stern Bush next to and supporting propeller 1000 m.m. Propeller, dia. 2420 m.m. Pitch 1555 m.m. No. of blades 4 Material bronze whether moveable - Total developed surface 40% sq feet

Moment of inertia of propeller including entrained water (lbs. in<sup>2</sup> or Kg. m<sup>2</sup>) 1369 Kind of damper, if fitted -

Method of reversing Engines by air Is a governor or other arrangement fitted to prevent racing of the engine yes Means of lubrication forced Thickness of cylinder liners 30 m.m. Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

Are the exhaust pipes and silencers water cooled yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine led to funnel Cooling Water Pumps, No. and how driven 5 MAIN + 4 AUX, ALL EL. DRIVEN Working F.W. MAIN: 10F60TH, AUX: 10F16TH

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. and capacity - Can one be overhauled while the other is at work -

Bilge Pumps connected to the Main Bilge Line { No. and capacity of each two general service pumps 60TH EACH. How driven both electric driven }

Is the 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 -

Ballast Pumps, No. and capacity 2 G.S. PUMPS 60TH EACH Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 B.Y.M.E 14 m<sup>3</sup>/H; 1 E.L. 15 m<sup>3</sup>/H.

Are two independent means arranged for circulating water through the Oil Cooler yes Branch Bilge Suctions TOTAL 7

No. and size: - In machinery spaces 2 of 2 1/2" In pump room -

holds, &c. TWO OF 2 3/4"; TWO OF 2 1/2"; COFFERDAM ONE OF 2 1/2"; HAND PUMPS SUCTIONS: CHAIN LOCKER: ONE OF 2"; FORECASTLE ONE OF 2" (2 SCUPPERS OF 2" IN STEERING GEAR COMP.)

Direct Bilge Suctions to the engine room bilges, No. and size ONE OF 4"; ONE OF 3 1/2"

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 ON BOXES Are they fitted with valves or cocks WITH VALVES Are they fixed efficiently 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 -

What pipes pass through the bunkers - How are they protected -

What pipes pass through the deep tanks - 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 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 - 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 -

Main Air Compressors, No. - No. of stages - diameters - stroke - driven by -

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 60/130 m.m. stroke 90 m.m. driven by ELECTRIC MOTOR

All Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 75/85 m.m. stroke 70 m.m. driven by KROMHOUT AUX. ENGINE

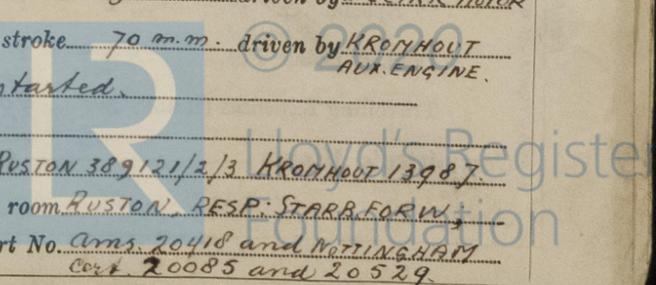
What provision is made for first charging the air receivers Kromhout auxiliary engine handstarted

Reversing Air Pumps or Blowers, No. - How driven -

Auxiliary Engines { Have they been made under survey yes Engine Nos. RESTON 389121/2/3 KROMHOUT 13987 Makers' name RUSTON & HORNSBY (3) KROMHOUT (1) Position of each in engine room RUSTON RESP. STARR FORWARD RT: STARR AFTER. KROMHOUT ENS. IN SEPERATE PORT GENERATOR E.R. ON AFTER - Report No. Ans. 20418 and NOTTINGHAM - BOATDECK. Corr. 20085 and 20529 }

004988-005003-0137

23/3/56



AIR RECEIVERS:—Have they been made under survey YES State No. of report or certificate NOTTINGHAM 20471  
State full details of safety devices Spring loaded safety valves  
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 main 1 aux Total cubic capacity 2 x 2500 liter 1 x 5 cu. ft. Internal diameter 768 mm. 1.6" thickness 5/16"  
Seamless, welded or riveted longitudinal joint welded Material SM-steel Range of tensile strength 42-45.9 kg/cm<sup>2</sup> Working pressure main 30 kg/cm<sup>2</sup> aux. 300 lb.

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 4-6-54 Receivers - Separate fuel tanks 16-7  
(If not, state date of approval) 6-1-54 Pumping arrangements in machinery space Bills 6-1-54 O.F. 5-2-54  
Donkey boilers - General pumping arrangements 6-1-54  
Oil fuel burning arrangements -  
Have Torsional Vibration characteristics been approved YES Date and particulars of approval 4-6-54 FOR SERVICE SPEED 275 R

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes State if for "short voyages" only -  
State the principal additional spare gear supplied ONE screw shaft, LLOYD'S AMS NO 3657 A.B. 25-10-54  
ONE cast iron propeller, LLOYD'S ROTT. A.V.H. 28-8-54.  
1 set Rule spares for Ruston engines.

SCHEEPSWERF "DE WAAL" I.V.

The foregoing is a correct description, M. J. Dane Manufacturer.

Dates of Survey while building  
During progress of work in shops -  
During erection on board vessel 1954: 1/6; 20/6 ams. 1955: 15/3; 27/9; 14/10; 3/11; 23/11; 13/12; 14/12; 30/12. 1956: 4/1.  
Total No. of visits 11  
Dates of examination of principal parts—Cylinders - Covers - Pistons - Rods - Connecting rods -  
Crank shaft - Flywheel shaft - Thrust shaft 23-11-55 Intermediate shafts 23-11-55 Tube shaft -  
Screw shaft 28-6-54 Propeller 28-6-54 Stern tube 14-10-55 Engine seatings 23-11-55 Engine holding down bolts 23-11-55  
Completion of fitting sea connections 14-10-55 Completion of pumping arrangements 14-12-55 Engines tried under working conditions 4-1-56  
Crank shaft, material SM steel Identification mark LLOYD'S DTT. J. Q. 433 434 6-2-54 Flywheel shaft, material - Identification mark LLOYD'S 3962 H.A.B. 7.  
Thrust shaft, material SM steel Identification mark LLOYD'S AMS. 1689 J.E.V. 1-2-54 Intermediate shafts, material SM steel Identification mark AMS. 8157 A.  
Tube shaft, material - Identification mark - Screw shaft, material SM steel Identification mark LLOYD'S NO. 396 H.A.B. 9-3-  
Identification marks on air receivers MAIN PORT ink & Paint out: No. 8215/g-78 and No 8215-84. LLOYD'S TEST. T.P. 60 kg/cm<sup>2</sup> WP 30 H.A.B. 15 and 30-4-53. aux: NO. H. 3024 LLOYD'S TEST NOT. 60 lb. W.P. 300 lb. T.D.S 15-12-54.  
Welded receivers, state Makers' Name Main: Messrs. Stahlbau Rheinhausen. Aux. Messrs. Ruston & Hornsby.  
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  
Full description of fire extinguishing apparatus fitted in machinery spaces 2-10 gal; 3-2 gal both; 1-6 kg CO<sub>2</sub> extinguishers 2 hydrants, 2 hoses, 2 J.S. nozzles.  
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 -  
What is the special notation desired -  
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 MV GILIGENTENG. MV GILITANG.

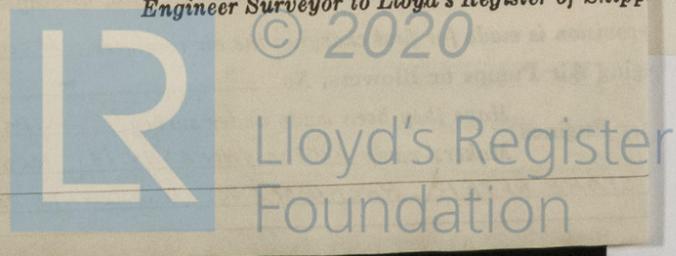
General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)  
The machinery of this vessel was made and fitted under special survey in accordance with approved plans, Secretary's letters and Society's Rules. Materials used have been tested as required and the workmanship was found good. Explosion relief valves are fitted on each main engine cylinder crank case.  
On completion the machinery was examined under full working and manoeuvring conditions during a trial trip on the North Sea and found satisfactory and in my opinion merits the Committee's approval to be entered in the Society's Register book with records of + LMC 1.56 and O.G. Copy certificates of intermediate working and spare tailshafts, working and spare propellers and of auxiliary air receiver attached.

The amount of Entry Fee ... £ 572.-  
Special ... £ :  
Donkey Boiler Fee... £ :  
Travelling Expenses (if any) £ 86.50  
When applied for 28.2.1956  
When received 19.

Havehippen  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute  
Assigned + LMC 1.56  
OG.

TUESDAY 27 MAR 1956



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