

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 Survey held at Kalkbommel Date, First Survey 1-6-1954 Last Survey 4-1-1956  
Reg. Book. 35099 on the Twin Screw vessel m/v "GILIRADJA" Number of Visits 11  
Single Triple Quadruple  
Built at Kalkbommel By whom built Scheepwerf, De Waal N.V. Yard No. 652 When built 1956  
Engines made at Amsterdam By whom made Menus Werkspoor N.V. Engine No. 1797 When made 1954  
Donkey Boilers made at - By whom made - Boiler No. - When made -  
Brake Horse Power { Maximum - Owners Indonesian Government Port belonging to Kalianget  
Service 1380  
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, &amp;c. - Type of Engines T.M.A.S 3910 (Ans. 341 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 680 m.m. No. of cylinders 10 No. of cranks 10Mean 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 275Flywheel 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 DieselCrank Shaft, { Solid forged as per Rule affe. dia. of journals as fitted 310 Crank pin dia. 200 m.m. Crank webs 155 m.m. Mid. length breadth 700 m.m. Thickness parallel to axis -  
Semi-built as fitted 310 155 m.m. Centre photo Mid. length thickness 125 m.m. shrunk Thickness around eyehole -  
All built as fitted 310Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule affe. Thrust Shaft, diameter at collars as per Rule affe.  
as fitted - as fitted 370 m.m. as fitted 395 m.m.Tube Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule affe. Is the { tube screw } shaft fitted with a continuous liner { no  
as fitted - as fitted 323 m.m. top cone

Bronze 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 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

or 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 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

W MAIN: 10F60TH Spare F.W. MAIN: 10F60TH MAIN: 2G.5. PUMPS, 60TH EACH 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. -

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.5. 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, &amp;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 COMPART.)

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

Small 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 hand started.

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 &amp; HORNSBY (3) KROMHOUT (1) Position of each in engine room RUSTON RESP. STARR FORWARD

RT. STARR AFTER. KROMHOUT ENS. IN SEPERATE PORT GENERATOR R.O. ON AFTER - Report No. Ans. 20418 and NOTTINGHAM

- BOATDECK. - Cert. 20085 and 20529



**AIR RECEIVERS:**—Have they been made under survey YES State No. of report or certificate NOTTINGHAM 620471  
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 Internal diameter 768 mm thickness 5/16"  
Seamless, welded or riveted longitudinal joint welded Material SM-steel Range of tensile strength main 30 kg/cm<sup>2</sup> aux. 300 kg/cm<sup>2</sup> Working pressure main 30 kg/cm<sup>2</sup> aux. 300 kg/cm<sup>2</sup>

**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 Bill 6-1-54  
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  
4 set Rule spares for Ruston engines

SCHEEPSWERF "DE WAAL" L.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 D.M. J. Q Flywheel shaft, material - Identification mark LLOYD'S 3962 H.A.B. 9.  
Thrust shaft, material SM-steel Identification mark LLOYD'S AMS. 1689 Intermediate shafts, material SM-steel Identification marks LLOYD'S NO. 396  
Tube shaft, material - Identification mark - Screw shaft, material SM-steel Identification mark H.A.B. 9-3-  
Identification marks on air receivers MAIN PORT INK & PORT OUT: NO. 8215/9-78 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 kg/cm<sup>2</sup> 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  
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 tailshaft, 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.

Committee's Minute + LMC 1.56  
Assigned O.G.

TUESDAY 27 MAR 1956

Harchipper  
Engineer Surveyor to Lloyd's Register of Shipping