

REPORT ON OIL ENGINE MACHINERY.

No. 368056

Received at London Office

Date of writing Report 20th July 1953 When handed in at Local Office 19 Port of Rotterdam **RO SEP 1953**

Survey held at Haltbommel Date, First Survey 11th June Last Survey 7th July 1953
Number of Visits 5

Single on the Twin Triple Quadruple Screw vessel M.V. "Burdjambal" Tons Gross 10,743.7 Net 2,339.5

Engines made at Amsterdam By whom built Thuis "de Waal" Yard No. 641 When built 1953
By whom made Thuis "Werkspoor" NV Engine No. 1435-1439 When made 1953

Boiler No. ✓ When made ✓ Port belonging to Djakarta
By whom made ✓ Owners Indonesian Government

Maximum Horse Power 500 x 2 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes
Service 116 x 2 = 232

Use for which vessel is intended Business going Service Please see Amsterdam report No. 10562

ENGINES, &c. — Type of Engines Heavy oil engines 2 or 4 stroke cycle 4 cycle Single or double acting Single

Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 270 mm Length of stroke 500 mm No. of cylinders 4 No. of cranks 0

Mean Indicated Pressure 7.5 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 320 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum 175 Service ✓

Flywheel dia. 1120 mm Weight 1250 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 1020 kg cm² Means of ignition Compression Kind of fuel used Diesel oil

Crankshaft, { Solid forged dia. of journals as per Rule Crank pin dia. 200 mm Crank webs Mid. length breadth shrunk Thickness parallel to axis ✓
Semi built as fitted 100 mm Mid. length thickness ✓ Thickness around eye-hole ✓
All built as fitted ✓

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted 120 mm Thrust Shaft, diameter at collars as fitted 85 mm

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

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted 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 ✓
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 ✓ Is an approved Oil Gland fitted at the after end of stern tube no If so, state type ✓

Propeller, dia. 1750 mm Pitch 1265 mm No. of blades 3 Material brass whether moveable ✓ Total developed surface 30.6 % sq. feet
Moment of inertia of propeller including entrained water (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 Yes Means of lubrication Regid Thickness of cylinder liners ✓ Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

Lagged with non-conducting material ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine to funnel

Cooling Water Pumps, No. and how driven 3 1 each main engine Working F.W. ✓
Spare F.W. ✓ S.W. ✓ 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 1 on each main engine Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line (No. and capacity of each 3 2 x 0.35 l/min / 90 H.P. 1 x 0.35 l/min / 90 H.P. How driven 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 1 x 0.35 l/min Power Driven Lubricating Oil Pumps, including spare pump, No. and size two x 1900 l/h electric driven

Are two independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions Leather

No. and size: — In machinery spaces 70 x 70 mm (2 long room, 1 eng. room / Rotterdam, 2 in tunnel) In pump room ✓

Direct Bilge Suctions to the engine room bilges, No. and size 2 x 0.00 mm

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes 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 Yes

Are all Sea Connections fitted direct on the skin of the Ship no 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 Above

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 ✓

That pipes pass through the bunkers no (pipe tunnel) 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 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 Yes Is it fitted with a watertight door Yes worked from deck

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. one each engine No. of stages ✓ diameters ✓ stroke ✓ driven by ✓

Auxiliary Air Compressors, No. 2 Capacity 17 l/h No. of stages 2 diameters 95-110 mm stroke 85 mm driven by Electric driven

Small Auxiliary Air Compressors, No. 1 Capacity 15 l/h No. of stages 2 diameters 75-85 mm stroke 70 mm driven by Emergency engine

What provision is made for first charging the air receivers Aux. sepl engine hand started

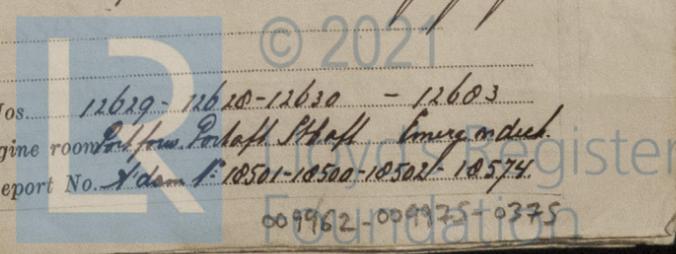
Scavenging Air Pumps or Blowers, No. ✓ How driven ✓

Auxiliary Engines Have they been made under survey Yes Engine Nos. 12629-12630-12630-12603

Makers name Thuis Kromhout Rotterdam Position of each in engine room 2 in fore Peckoff Peckoff Emergency on deck

Report No. Rotterdam No. 10501-10502-10502-10574

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20/10/53



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AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of report or certificate *Sheffield 19060-9*
 State full details of safety devices *one spring loaded safety valve on each receiver* ✓
 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 + 1* ✓ Total cubic capacity *1 x 1000 + 1 x 1000* ✓ Internal diameter *✓* thickness *✓*
 Seamless, welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *✓*

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 *✓* Receivers *✓* Separate fuel tanks *✓*
 (If not, state date of approval)
 Donkey boilers *✓* General pumping arrangements *20-10-52* Pumping arrangements in machinery space *23-1-53*
 Oil fuel burning arrangements *✓*
 Have Torsional Vibration characteristics been approved *Yes* Date and particulars of approval *20-7-52*

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 *1 shaft*



The foregoing is a correct description, *Manufacturer.*

Dates of Survey while building
 During progress of work in shops - - *11-29/2/16 3/20 4-17-25/9/20/3/6-7*
 During erection on board vessel - - *16-10-19/10-11-52/11-13-14-15-16-17-1953*
 Total No. of visits *14*
 Dates of examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
 Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *17-25/*
 Screw shaft *✓* Propeller *✓* Stern tube *10/19-52* Engine seatings *17-25/3-53* Engine holding down bolts *12-*
 Completion of fitting sea connections *11-29/10-52* Completion of pumping arrangements *3/6-53* Engines tried under working conditions *6-7/17-1953*
 Crank shaft, material *✓* Identification mark *✓* Flywheel shaft, material, *✓* Identification mark *✓*
 Thrust shaft, material *✓* Identification mark *✓* Intermediate shafts, material *✓* Identification marks *✓*
 Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *✓* Identification mark *✓*
 Identification marks on air receivers *✓*

Welded receivers, state Makers' Name *See Sheffield Certificate*
 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 *Two 2 gallon + one 2 gallon fire beam extinguisher, two CO₂ extinguishers, one 10 lb. and 2 lbs. with nozzle connected to deck pump fire*
 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 *✓*
 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 *no*
 Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *M.V. Kungbara*

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)
The machinery of this vessel has been made and fitted in accordance with the approved plans, Secretary's letters and Society's Rules. Materials tested as required and workmanship found good.
Upon completion the machinery have been tried under full working conditions on a 2 days trial trip to the North Sea when all was found to be in a good working and manoeuvring condition and in my opinion merits the approval of the Committee to be recorded with the record of + M.C. 7-53 Oil engine C.L. in the Society's Register Book when a satisfactory report of survey upon arrival in Indonesia have been received in London.

The amount of Entry Fee ... £ *520.00*
 Special ... £ : :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ *132.00*
 Committee's Minute
 Assigned *Deferred for Examination, See Dja Rpt. No 3849.*



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