

## REPORT ON OIL ENGINE MACHINERY.

No. 369516

Received at London Office 32 NOV 1953

Writing Report 24/0 1953 When handed in at Local Office 19 Port of Rotterdam

Survey held at Druten Date, First Survey 20/4 '53 Last Survey 21/0 1953 Number of Visits 8

k. Single on the Twin Triple Quadruple Screw vessel "BAJAN"

Tons Gross 121.87 Net 74.63

Druten By whom built Scheepswerk Jansen N.V. Yard No. J129 When built 1953

made at Amsterdam By whom made Werkspoor N.V. Engine No. 1463 When made 1953

ilers made at By whom made Boiler No. - When made -

se Power { Maximum Owners Indonesian Government Port belonging to Djakarta

er Rule 86 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

which vessel is intended Indonesian Archipelago

GINES, &c. - Type of Engines T.M.A.S. 276 2 or 4 stroke cycle 4 Single or double acting single

pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 270 Length of stroke 500 No. of cylinders 6 No. of cranks 6

icated Pressure 7.5 kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in crank) 320 Is there a bearing between each crank yes Revolutions per minute { Maximum - Service 375

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

Solid forged as per Rule - Crank pin dia. 200 Crank webs Mid. length breadth 340 Thickness parallel to axis -

Semi built - dia. of journals as fitted 200 Mid. length thickness 82 shrunk Thickness around eyehole -

All built

Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as per Rule -

as fitted - as fitted 190 as fitted 145

ft, diameter as per Rule - Screw Shaft, diameter as per Rule - Is the (tube screw) shaft fitted with a continuous liner { yes

as fitted - as fitted 177.5

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 boss yes

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

er 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 -

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 the stern tube -

If so, state type - Length of bearing in Stern Bush next to and supporting propeller 790

r, dia. 151.5 Pitch 119.5 No. of blades 4 Material Bronze whether moveable solid Total developed surface 63.1 sq. feet

of inertia of propeller including entrained water (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 122 kg m<sup>2</sup> Kind of damper, if fitted -

of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine yes Means of enforced Thickness of cylinder liners 21 Are the cylinders fitted with safety valves 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 funnel

Working F.W. -

Spare F.W. - S.W. 30 T/h Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

mps worked from the Main Engines, No. and capacity one 2 16 T/h Can one be overhauled while the other is at work -

connected to the Main Bilge Line No. and capacity of each one 2 16 T/h, one 2 30 T/h

How driven m.e. electr.

oling 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 nents -

pumps, No. and capacity one 2 30 T/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size one 2 4.5 T/h, one 2 4.8 T/h

independent means arranged for circulating water through the Oil Cooler yes Branch Bilge Suctions -

size: - In machinery spaces one 2 3 1/4", one 2 2 1/2", two 2 2" In pump room -

&c. 5 2" ✓

ilge Suctions to the engine room bilges, No. and size one 2 3 1/4", one 2 2 1/2"

ie 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 mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

ea Connections fitted direct on the skin of the Ship electr. Are they fitted with valves or cocks yes Are they fixed by 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

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 -

pes pass through the bunkers - How are they protected -

pes pass through the deep tanks - Have they been tested as per Rule -

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

rangement 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 r from one compartment to another yes Is the shaft tunnel watertight tunnel Is it fitted with a watertight door - worked from -

od vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

Air Compressors, No. one No. of stages two diameters 120/100 stroke 90 driven by m.e.

ary Air Compressors, No. one No. of stages two diameters 110/95 stroke 85 driven by aux. engine

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

provision is made for first charging the air receivers aux. engine hand started

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

ary Engines Have they been made under survey yes Engine Nos. 13031 ✓

Makers name Krambert Position of each in engine room 11b.

Report No. 10324

009888-009895-0125



AIR RECEIVERS:—Have they been made under survey. yes State No. of report or certificate 8/C  
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 Total cubic capacity 1240 Lbs Internal diameter 50 2 thickness 9 5  
Seamless, welded or riveted longitudinal joint seamless Material S 17 Range of tensile strength 33.1-40.2 Working pressure 16-50

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 13-3-53 Receivers 13-3-53 Separate for  
(If not, state date of approval)  
Donkey boilers — General pumping arrangements 23-4-52 Pumping arrangements in machinery space 23-  
Oil fuel burning arrangements —  
Have Torsional Vibration characteristics been approved yes Date and particulars of approval 25-3-52  
12-11-52

### SPARE GEAR.

Has the spare gear required by the Rules been supplied yes State if for "short voyages" only none  
State the principal additional spare gear supplied yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops —  
During erection on board vessel 20/4, 29/4, 27/5, 16/6, 2/7, 7/8, 12/8, 29/8 53  
Total No. of visits 8

Dates of examination of principal parts—Cylinders — Covers — Pistons — Rods — Connecting rods —  
Crank shaft — Flywheel shaft — Thrust shaft — Intermediate shafts 2/7 Tube shaft —  
Screw shaft 20/4 Propeller 20/4 Stern tube 29/4 Engine seatings 2/7 Engine holding down bolts —  
Completion of fitting sea connections 29/4 Completion of pumping arrangements 2/8 Engines tried under working conditions —  
Crank shaft, material — Identification mark — Flywheel shaft, material — Identification mark —  
Thrust shaft, material — Identification mark — Intermediate shafts, material S 17 steel Identification marks —  
Tube shaft, material — Identification mark — Screw shaft, material S 17 steel Identification mark —  
Identification marks on air receivers LLOYDS nos 43, 40 1/2 T.P. 60 at W.P. 200 at J.L. 23-2-52

Welded receivers, state Makers' Name Rheinisch-Ruhrstahl AG Düsseldorf  
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 3 x 2 gallon foam, 1 Pyrex, one 1/2 lb  
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 m.v. "Bango" etc.

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 Rules, approved plans and Secretary's letters and the ship is good. The Machinery was tested under full working conditions and all found to be in good working order. In my opinion the Machinery of this vessel merits the approval of the Committee and be recorded in the Society's Register Book + L.M.C. 8-53 Oil Engines C.L.

The amount of Entry Fee ... £

Special ... £ 220.-

Donkey Boiler Fee... £

Travelling Expenses (if any) £ 113.-

When applied for 28.10. 1953

When received 19

Engineer Surveyor to Lloyd's Register of

Committee's Minute THURSDAY 19 NOV 1953

Assigned Deferred for Examination

FRIDAY 18 DEC 1953

See Dia. Rpt 9

Nº 3929

Lloyd's Register Foundation