

REPORT ON OIL ENGINE MACHINERY.

No. 18663

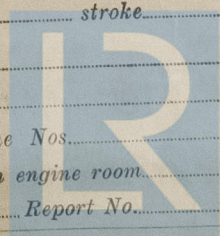
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Date of writing Report 10 Jan 1953 When handed in at Local Office 19 Port of Amsterdam
No. in Survey held at Amsterdam Date, First Survey 11 May Last Survey 20 Nov 1952
Reg. Book. M.V. PERMATA Number of Visits 12
Single on the Twin Triple Quadruple Screw vessel Indonesian Republic
Built at Groningen By whom built E. J. Smit Yard No. 727 When built 1952
Engines made at Amsterdam By whom made Werkspoor N.V. Engine No. 1472 When made 1952
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power Maximum 500 Owners Port belonging to
Service 100 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
M.N. as per Rule 100
Trade for which vessel is intended Open Sea Service

OIL ENGINES, &c. — Type of Engines T.M.A.S. 270 2 or 4 stroke cycle 4 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 8 No. of cranks 8
Mean Indicated Pressure 7.56 kg/cm² Ahead firing order 1-7-6-5-2-3-4 Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 318 mm Is there a bearing between each crank yes Revolutions per minute Maximum 325 Service
Flywheel dia. 1120 mm Weight 1250 kg Moment of inertia of flywheel (in in² or Kg.m²) 1030 Means of ignition Comp. Kind of fuel used Diesel
Crank Shaft, Solid forged dia. of journals as per Rule 200 mm Crank pin dia. 200 mm Crank webs Mid. length breadth 340 mm Thickness parallel to axis shrunk Mid. length thickness 82 mm Thickness around eyehole
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 205 mm Thrust Shaft, diameter at collars as per Rule 215 mm
Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 200 mm Is the (tube screw) shaft fitted with a continuous liner no
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 If so, state type Length of bearing in Stern Bush next to and supporting propeller
Propeller, dia. 1840 mm Pitch No. of blades 4 Material bronze whether moveable Total developed surface sq. feet
Moment of inertia of propeller including entrained water (in in² or Kg.m²) 259 Kind of damper, if fitted yes
Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine yes Means of lubrication forced Thickness of cylinder liners 21 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Copper If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Cooling Water Pumps, No. and how driven 11 am Type 130 x 75 cap 26 T/h Working P.W. ME driven
S.W. Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Bilge Pumps worked from the Main Engines, No. and capacity 11 am Type 130 x 75 cap 26 T/h Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and capacity of each How driven
Is the 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
Ballast Pumps, No. and capacity ME Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1. 70 T. cap 4.5 T/h
Are two independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions In pump room
No. and size:—In machinery spaces In holds, &c.
Direct Bilge Suctions to the engine room bilges, No. and size
Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes 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
Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed sufficiently 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
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
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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from
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. 1 No. of stages 2 diameters 100/110 mm stroke 90 mm driven by Main Eng
Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
What provision is made for first charging the air receivers
Scavenging Air Pumps or Blowers, No. How driven Engine Nos.
Auxiliary Engines Have they been made under survey Position of each in engine room Report No.
Makers name

013057-013062-0079



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AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate A.P. No. 1481/52
State full details of safety devices 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 R Internal diameter 4.98" in thickness 11.5" in
Seamless, welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 35.8/49.1 Working pressure 30 atm
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 29-12-52 Receivers 29-12-52 Separate fuel tanks ✓
(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 and particulars of approval 5-1-53
8-1-53
SPARE GEAR.
Has the spare gear required by the Rules been supplied ✓ State if for "short voyages" only ✓
State the principal additional spare gear supplied ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1952: 1/5-7/5-23/5-31/5-6/6-9/6-11/6-19/6-29/6
During erection on board vessel - 1952: 1/5-7/5-23/5-31/5-6/6-9/6-11/6-19/6-29/6
Total No. of visits 12
Dates of examination of principal parts—Cylinders 1-5-52 Covers 19-8-52 Pistons 9-8-52 Rods 18-8-52 Connecting rods 18-8-52
Crank shaft 31-5-52 Flywheel shaft Block Thrust shaft Block Intermediate shafts Block Tube shaft Block
Screw shaft Block Propeller Block Stern tube Block Engine seatings Block Engine holding down bolts Block
Completion of fitting sea connections Block Completion of pumping arrangements Block Engines tried under working conditions 7-11-52
Crank shaft, material S.M. Steel Identification mark Block Flywheel shaft, material Block Identification mark Block
Thrust shaft, material Block Identification mark Block Intermediate shafts, material Block Identification marks Block
Tube shaft, material Block Identification mark Block Screw shaft, material Block Identification mark Block
Identification marks on air receivers No. 10/2. Ployer Test 60 atm. W.P. 30 atm. HSA 11-7-51. No 14/1. Ployer Test 60 atm. W.P. 30 atm. HSA 11-7-51.
Welded receivers, state Makers' Name Block
Is the flash point of the oil to be used over 150°F Block
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Block
Full description of fire extinguishing apparatus fitted in machinery spaces Block
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Block If so, have the requirements of the Rules been complied with Block
What is the special notation desired Block
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with Block
Is this machinery duplicate of a previous case Block If so, state name of vessel Block

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)

This engine has been built under special survey in accordance with approved plans, Society Rules and Secretarial letters. All materials have been tested as required and the workmanship found good. The engine has been tested on makers test bed and found working satisfactorily. In my opinion, the vessel for which this engine is intended will be eligible for the notation L.M.C. with date when fitted and examined on board. Copy certificates of crankshaft and airreceivers attached.

The amount of Entry Fee 2/3 x 100 x 5.60 = £374.
Special £ When applied for 13-1-1953
Donkey Boiler Fee... .. £ When received 19
Travelling Expenses (if any) £22.-
Committee's Minute TUESDAY 22 SEP 1953
Assigned See Rpt 46.

for Mr. Brown.

Engineer Surveyor to Lloyd's Register of Shipping.



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