

REPORT ON OIL ENGINE MACHINERY.

No. 10892

15 JUN 1953

Received at London Office

Date of writing Report 6th May 1953 When handed in at Local Office 19 Port of Amsterdam

No. in Survey held at Amsterdam Date, First Survey 20th June 1952 Last Survey 26 May 1953

Reg. Book. M.V. "PUSPARAGAM." Number of Visits 11
Screw vessel for Indonesian Republic

Yard No. 217 When built 1953
By whom built Scheepswerk & Pottje
By whom made Werkspoor N.V.

Boiler No. 1474 When made 1953
By whom made
Boiler No. When made

Port belonging to
Maximum Service 500 Owners
Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.

Trade for which vessel is intended Open sea service.
Type of Engines T.M.A.S. 278 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 20 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 1-4-7-6-8-5-2-3 Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 218 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum Service 325

Moment of inertia of flywheel (in in² or Kg.m²) 1030 Means of ignition Comp Kind of fuel used Diesel
Flywheel dia. 1120 mm Weight 1250 kg

Crank Shaft, dia. of journals as per Rule as fitted 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 as fitted Intermediate Shafts, diameter as per Rule as fitted 205 mm Thrust Shaft, diameter at collars as per Rule as fitted 215 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 200 mm Is the tube shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted 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 fixed Total developed surface sq. feet
Moment of inertia of propeller including entrained water (in in² or Kg.m²) 259 Kind of damper, if fitted

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine yes Means of lubrication forged Thickness of cylinder liners 21 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

Are they lagged with non-conducting material Insulated 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 1 ran Type 130x75 cap 26 Working by Main Eng

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 1 ran Type 130x75 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.

ME Driven Lubricating Oil Pumps, including spare pump, No. and size 1.20 T. cap 4.5 T/h
Are two independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions

No. and size:—In machinery spaces In pump room
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.

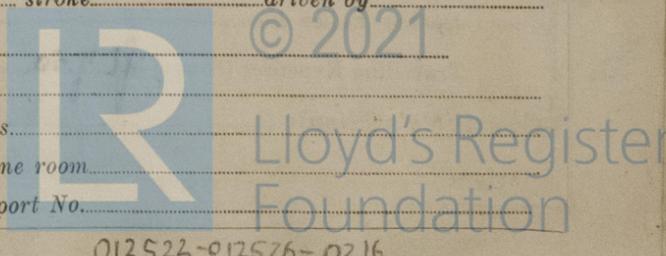
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another. Is the shaft tunnel watertight. Is it fitted with a watertight door. worked from.

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 100/120 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.
Leaving Air Pumps or Blowers, No. How driven.

Auxiliary Engines Have they been made under survey. Engine Nos. Makers name Position of each in engine room Report No.



JM
26/6/53

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AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate D.F.C. 2487 14/16
 State full details of safety devices Spring loaded safety valves fitted
 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 h Internal diameter 502 mm thickness 9.5 mm
 Seamless, welded or riveted longitudinal joint Seamless Material Sm steel Range of tensile strength 32.7-47.1 kg/cm² Working pressure 30 atm
34.1-48.5 kg/cm²

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
5/1/53
 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 ✓

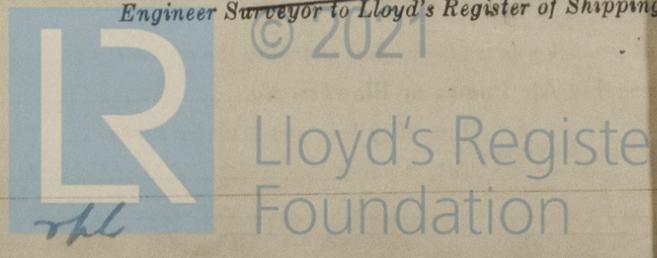
The foregoing is a correct description, NEKSPOR N.V. Manufacturer.

Dates of Survey while building
 During progress of work in shops - 1952: 20/6-23/6-25/6-27/6-9/7-22/9-1953: 7/2-17/2-21/5-26/5.
 During erection on board vessel - - -
 Total No. of visits 11
 Dates of examination of principal parts—Cylinders 23-6-52 Covers 9-7-52 Pistons 22-9-52 Rods — Connecting rods 22-9-52
 Crank shaft 20-9-52 Flywheel shaft Block: 27-6-52 Thrust shaft 20-2-52 Intermediate shafts — Tube shaft —
 Screw shaft — Propeller — Stern tube — Engine seatings — Engine holding down bolts —
 Completion of fitting sea connections — Completion of pumping arrangements — Engines tried under working conditions 21-5-53
 Crank shaft, material Sm Steel Identification mark Lloyds No. 240 Flywheel shaft, material — Identification mark —
 Thrust shaft, material Sm Steel Identification mark Lloyds No. 16670 Intermediate shafts, material — Identification marks —
 Tube shaft, material — Identification mark — Screw shaft, material — Identification mark —
 Identification marks on air receivers 11-12/1 Lloyds Int. T.P. 30 atm. W.P. 30 atm. H.S. 4-3-52

Welded receivers, state Makers' Name Rheinische Röhrenwerke A.G. of Düsseldorf - Hürtenfeld
 Is the flash point of the oil to be used over 150°F —
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with —
 Full description of fire extinguishing apparatus fitted in machinery spaces —
 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 —
 Is this machinery duplicate of a previous case — If so, state name of vessel —

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 Secretary's letters. All materials have been tested as required and the workmanship found good. The engine has been tried on makers Testbed under full load conditions 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 the machinery has been fitted and tried on board. The engine has been shipped to Waterhuizen (Groningen District).
Copy certificates of crankshaft, Thrust shaft and airreceivers attached hereto

The amount of Entry Fee ... fl. 374
 Special ... — When applied for 11-6 1953
 Donkey Boiler Fee... — When received 19
 Travelling Expenses (if any) fl. 7.50
 (Committee's Minute) See minute on hull fe.
 Assigned —



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