

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 16552

Received at London Office

12 APR 1948

Date of writing Report 21<sup>st</sup> March 1948 When handed in at Local Office 19 Port of Amsterdam  
 No. in Survey held at Amsterdam & Zaandam Date, First Survey 20-6-47 Last Survey 19<sup>th</sup> March 1948  
 Reg. Book. Number of Visits 27  
 on the Single Screw Motor vessel "PRINSENGRACHT" Tons { Gross 499.97  
 { Net 350.90  
 Built at Zaandam By whom built Zaandlandsche Scheepsbouw My Yard No. 448 When built 1948  
 Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 873 When made 1942-fitted 1948  
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓  
 Brake Horse Power 500 580 Owners SPLIETHOF'S BEVRACHTINGSKANTOOR Port belonging to Amsterdam  
 Nom. Horse Power as per Rule 104 MN. 87. Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which vessel is intended Ocean Trade

all dimensions in mm  
 IL ENGINES, &c. — Type of Engines 4 SCSA 2 or 4 stroke cycle 4 Single or double acting S  
 Maximum pressure in cylinders 40 kg/cm<sup>2</sup> Diameter of cylinders 270 Length of stroke 500 No. of cylinders 8 No. of cranks 8  
 Mean Indicated Pressure 7.5 kg/cm<sup>2</sup> Span of bearings, adjacent to the crank, measured from inner edge to inner edge 318 Is there a bearing between each crank yes  
 Revolutions per minute 325 Flywheel dia. 1120 Weight 560 kg Means of ignition compression Kind of fuel used Diesel oil  
 Crank Shaft, Solid forged as per Rule approved dia. of journals 200 Crank pin dia. 200 Crank webs 340 Mid. length breadth 82 Thickness parallel to axis ✓  
Semi built as fitted 200 Mid. length thickness 82 shrunk Thickness around eye hole ✓  
All built  
 Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as per Rule approved Thrust Shaft, diameter at collars as fitted approved  
 as fitted ✓ as fitted 200 as per Rule 215  
 Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule approved Is the tube shaft fitted with a continuous liner { no }  
 as fitted ✓ as fitted 196 as fitted ✓  
 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 or other appliance fitted at the after end of tube shaft no If so, state type ✓ Length of bearing in Stern Bush next to and supporting propeller 800  
 Propeller, dia. 1780 Pitch 1175 No. of blades 4 Material bronze whether moveable solid Total developed surface 125 m<sup>2</sup> sq feet  
 Method of reversing Engines directly Is a governor or other arrangement fitted to prevent racing of the engine ✓ declutched yes Means of lubrication forced Thickness of cylinder liners 21 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled ✓  
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 ✓ Cooling Water Pumps, No. 1 ROTARY 15TH AND IN CASE OF EMERGENCY THE BALLAST PUMP the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
 Bilge Pumps worked from the Main Engines, No. 1 ROTARY 15TH Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
 Pumps connected to the Main Bilge Line { No. and size ME Bilge pump 15TH — Ballast pump - rotary 33.5TH — Bilge pump - rotary 33.5TH  
 How driven — BELT GEARING (driven by ME or Aux. motor) }  
 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 size 1 (see above) Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 ME driven - rotary - 4.8TH  
1 Stand-by - ram type - 3TH  
1 Hand pump  
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size: — In machinery spaces 1 (φ 51) (1 suction (φ 50) on hand bilge pump) In pump room ✓  
 In holds, &c. 4 totally (φ 63) 1 (φ 70) on Bilge pump and on ME Bilge pump  
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 (φ 70) on Ballast pump  
 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 yes Are they fitted with valves or cocks yes 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 ✓  
 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 no tunnel 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. one No. of stages 2 diameters 100/120 stroke 90 driven by ME  
 Auxiliary Air Compressors, No. 1 supplied with Rotterdam Certif. N° 2013 - dated 19-1-48 No. of stages 2 diameters 60/130 stroke 90 driven by belt gearing  
 Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓  
 What provision is made for first charging the air receivers aux. air compressor (Aux. motor in hand - started)  
 Scavenging Air Pumps, No. ONE - R.A. Lister Ltd. Dursley. N° CS.60042. Type 2JPMA. 2 cyls. 5 1/2" diameter 5 1/2" stroke 41 driven by 18 BHP  
 Auxiliary Engine crank shafts, diameter as fitted journals: 3" - crank pin: 3" Position E room Starb. side  
 Have the auxiliary engines been constructed under special survey ✓ Is a report sent herewith no  
 The Maker was not able to supply an engine, covered by L.R. certificate, in time. A stock engine of the desired type has now been supplied.



AIR RECEIVERS:—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

State No. of report or certificate

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

Injection Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

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

(If not, state date of approval)

Receivers

Separate fuel tanks

Donkey boilers

General pumping arrangements

Pumping arrangements in machinery space

Oil fuel burning arrangements

### SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description

N. V. ZWARTLANDER  
SCHEEPSBOUWMAATSCHAPPIJ

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 1947: 20/6-2/7-14/7-5/8-12/9-19/9-24/9-29/9-3/10-10/10-21/10-31/10-8/11-17/11-18/11-24/11-26/11-1948: 30/1-16/2  
During erection on board vessel - 1947: 21/11-20/12 1948: 17/2-23/2-3/3-13/3-18/3-19/3  
Total No. of visits 27

Dates of examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

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

Crank shaft, material

Identification mark

Flywheel shaft, material

Identification mark

Thrust shaft, material

Identification mark

Intermediate shafts, material

Identification marks

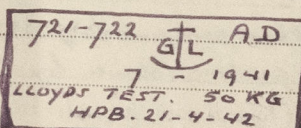
Tube shaft, material

Identification mark

Screw shaft, material

Identification mark

Identification marks on air receivers



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

Description of fire extinguishing apparatus fitted. 2 coxos (2") on deckwash line (1 fore + 1 aft) with 20 m hose (1 1/2")

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

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, &c)

The engine, having been built during the war under L.R. Special Survey, has been installed and completed under our supervision in accordance with the approved plans, Rule requirements and Secretary's letters. Found workmanship satisfactory. Main engine and auxiliaries have been tried under full charge on a trial trip with satisfactory results.

We are of opinion that this vessel is eligible to be recorded in the Register Book with the record of LMC.3,48

Original vibration Characteristics appeared in the Keelplate book dated 17.9.47 for Service Speed of 32.5 R.P.M.

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee... £

Travelling Expenses (if any) £

When applied for 9-4-1948

When received 19

Committee's Minute

Assigned

+ LMC 3,48  
+ NE 42 fitted 48

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation