

Rpt. 4b

14 OCT 1957

Date of writing report 2-9-57

Received London

Port Amsterdam

No. 21731

Survey held at Amsterdam

In shops 18

4-1-57

13-8-57

No. of visits

First date

Last date

On vessel

# FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name Gross tons

Managers Port of Registry Year Month

Ship built at Groningen By Scheepbouw Unie Yard No. 276 When 1957

Main Engines made at Amsterdam By Werkspoor N.V. Eng. No. 2079 When 1957

Boiler made at By Blr. Nos. When

Machinery installed at By When

Particulars of restricted service of ship, if limited for classification

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? Is ship intended to carry petroleum in bulk?

Refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant

Is the refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the notation is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines one No. of propellers Brief description of propulsion system

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Werkspoor TMAS 336

No. of cylinders per engine 6 Dia. of cylinders 330 mm stroke(s) 600 mm 2 or 4 stroke cycle 4 Single or double acting single

Maximum approved BHP per engine 650 at 325 RPM of engine and RPM of propeller.

Corresponding MIP 7.16 Kg/cm<sup>2</sup> (For DA engines give MIP top & bottom) Maximum cylinder pressure 50 Kg/cm<sup>2</sup> Machinery numeral 130

Are the cylinders arranged in Vee or other special formation? no If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? If so, how are upper pistons connected to crankshaft?

Where is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? No. and type of mechanically driven scavenge pumps or blowers per engine and how driven

No. of exhaust gas driven scavenge blowers per engine Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

Is a stand-by or emergency pump or blower fitted, state how driven? No. of scavenge air coolers Scavenge air pressure at full

Are scavenge manifold explosion relief valves fitted?

FOUR STROKE ENGINES. Is the engine supercharged? no Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per engine

No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

TWO & FOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel one Inlet one Exhaust one Starting one Safety one

Material of cylinder covers cast iron Material of piston crowns cast iron Is the engine equipped to operate on heavy fuel oil? no

Boiling medium for:—Cylinders water Pistons uncooled Fuel valves fuel oil Overall diameter of piston rod for double acting engines

Is the piston rod fitted with a sleeve? Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the

underside of pistons? no Is the engine of crosshead or trunk piston type? trunk Total internal volume of crankcase 5938 Ltrs No. and total area of explosion relief

devices 6-690 cm<sup>2</sup> Are flame guards or traps fitted to relief devices? yes Is the crankcase readily accessible? yes If not, must the engine be removed for

overhaul of bearings, etc.? Is the engine secured directly to the tank top or to a built-up seating? How is the engine started? by air

Can the engine be directly reversed? yes If not, how is reversing obtained?

Has the engine been tested working in the shop? yes How long at full power? 8 hours

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 18-3-57 State barred speed range(s), if imposed

Working propeller For spare propeller Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? no

Where positioned? Type No. of main bearings 7 Are main bearings of ball or roller

Distance between inner edges of bearings in way of crank(s) 394 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) solid

Diameter of journals 245 mm Diameter of crankpins Centre 240 mm Breadth of webs at mid-throw 480 mm Axial thickness of webs 100 mm

If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals SM steel Approved 50 Kg/mm<sup>2</sup>

Webs Tensile strength

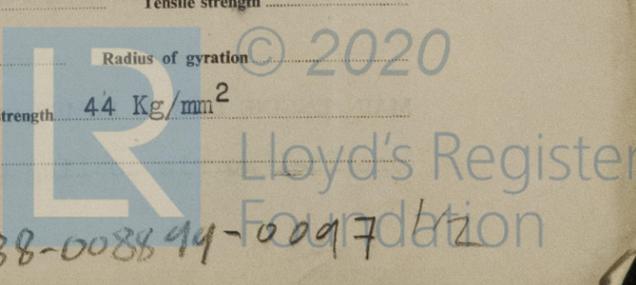
Diameter of flywheel 1400 mm Weight 800 Kg Are balance weights fitted? no Total weight Radius of gyration

Diameter of flywheel shaft 280 mm Material SM steel Minimum approved tensile strength 44 Kg/mm<sup>2</sup>

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) separate

6210

008888-008899-0097





GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This engine has been built under Special Survey, in accordance with the Rules, approved plans and Secretary's letters.

Tested materials have been used and the workmanship is good.

The engine was tested under full load conditions on Makers testbed and all found satisfactory

In my opinion this engine merits the approval of the Committee and after having been satisfactorily fitted and tested under full working conditions, this vessel may be recorded in the Society's Register Book LMC (with date)

A.C. Buyze.

*A.C. Buyze*  
 Engineer Surveyor to Lloyd's Register of Shipping.

PARTICULARS OF IDENTIFICATION MARKS (Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS Lloyds AMS No, 997<sup>A+B</sup>-998<sup>I+G</sup> 2-1-57, 1063<sup>F</sup>-1064<sup>D</sup> DVC 7-1-57

CRANKSHAFT ~~ON COMPROMISE~~ Lloyds Rot No. 608 EMD AB 6-3-57

FLYWHEEL SHAFT Lloyds AMS No. 4994 C AB 17-5-57

THRUSTSHAFT Lloyds AMS No. 5539 AB 3-7-57

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case?  If so, state name of vessel \_\_\_\_\_

Date of approval of plans for crankshaft 18-3-57 Straight shafting \_\_\_\_\_ Gearing \_\_\_\_\_ Clutch \_\_\_\_\_

Separate oil fuel tanks \_\_\_\_\_ Pumping arrangements \_\_\_\_\_ Oil fuel arrangements \_\_\_\_\_

Cargo oil pumping arrangements \_\_\_\_\_ Air receivers 18-3-57 Donkey boilers \_\_\_\_\_

Dates of examination of principal parts:—

Fitting of stern tube \_\_\_\_\_ Fitting of propeller \_\_\_\_\_ Completion of sea connections \_\_\_\_\_ Alignment of crankshaft in main bearings 15-3-57

Engine checks & bolts \_\_\_\_\_ Alignment of gearing \_\_\_\_\_ Alignment of straight shafting \_\_\_\_\_ Testing of pumping arrangements \_\_\_\_\_

Oil fuel lines \_\_\_\_\_ Donkey boiler supports \_\_\_\_\_ Steering machinery \_\_\_\_\_ Windlass \_\_\_\_\_

Date of Committee **TUESDAY 12 AUG 1958** Special Survey Fee **£. 473,—**

Decision *See Rpt. 1* Expenses " 9,—

Date when A/c rendered \_\_\_\_\_

