

Rpt. 4b

Date of writing report **23-5-1960** Received London **22/10-1959** Port **of Amsterdam** No. **2234810**
 Survey held at **Hengelo** No. of visits **14** In shops **14** First date **4/5-1960** Last date

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. _____ Name _____ Gross tons _____
 Owners _____ Managers _____ Port of Registry _____ Year Month _____
 Hull built at **Alblasserdam** By **Verolme United Shipyards** Yard No. **615 633** When _____
 Main Engines made at **Hengelo** By **Messrs. Gebr. Stork & Co** Eng. No. **7530** When **1960**
 Gearing made at _____ By _____ Blr. Nos. _____ When _____
 Donkey boilers made at _____ By _____ 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? _____
 Is 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 wording 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. **Stork HOTLO 1 x 75 x 150**
 No. of cylinders per engine **7** Dia. of cylinders **750 mm** stroke(s) **1500 mm** 2 or 4 stroke cycle **2** Single or double acting **single**
 Maximum approved BHP per engine **8400** at **118** RPM of engine and **8500** RPM of propeller.
 Corresponding MIP **7,68 kg/cm²** (For DA engines give MIP top & bottom) Maximum cylinder pressure **55 kg/cm²** Machinery numeral **1680** **1700**
 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? **no** If so, how are upper pistons connected to crankshaft? _____
 Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? **valves** No. and type of mechanically driven scavenge pumps or blowers per engine and how driven _____
 No. of exhaust gas driven scavenge blowers per engine **4** Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? **yes**
 If a stand-by or emergency pump or blower is fitted, state how driven _____ No. of scavenge air coolers **4** Scavenge air pressure at full power **0,41 kg/cm²** Are scavenge manifold explosion relief valves fitted? **yes**

FOUR STROKE ENGINES. Is the engine supercharged? _____ 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 _____ Exhaust **four** Starting **one** Safety **one**
 Material of cylinder covers **cast steel** Material of piston crowns **cast steel** Is the engine equipped to operate on heavy fuel oil? **yes**
 Cooling medium for: Cylinders **fresh water** Pistons **lub.oil** Fuel valves **fresh water** Overall diameter of piston rod for double acting engines _____
 Is the rod fitted with a sleeve? _____ Is welded construction employed for: Bedplate? **yes** Frames? **yes** Entablature: **cast iron** Is the crankcase separated from the underside of pistons? **yes** Is the engine of crosshead or trunk piston type? **crosshead** Total internal volume of crankcase **121,1 m³** No. and total area of explosion relief devices **14 - 6860 cm²** 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? **12 hours**

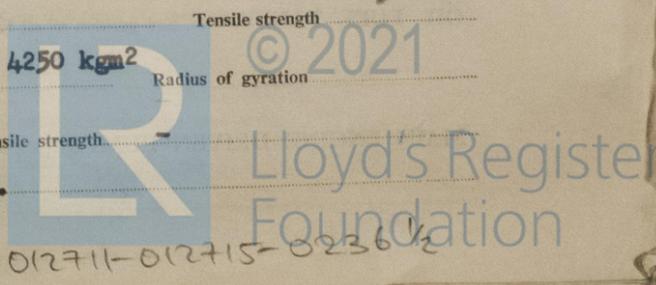
CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system **25/2-60** State barred speed range(s), if imposed **467 F.**
 for working propeller _____ For spare propeller _____ Is a governor fitted? **yes** Is a torsional vibration damper or detuner fitted to the shafting? _____

Where positioned? _____ Type _____ No. of main bearings **9** Are main bearings of ball or roller type? **no** Distance between inner edges of bearings in way of crank(s) **1056 mm** Distance between centre lines of side cranks or eccentrics of opposed piston engines _____

Crankshaft type: Built, semi-built, solid. (State which) **built** **crankshaft coupling bolts : U.T.S. = 69,7 kg/mm²**
 Diameter of journals **520 mm** Diameter of crankpins Centre **520 mm** Breadth of webs at mid-throw **976 mm** Axial thickness of webs **320 mm**
 Side _____ Pins _____ Minimum _____
 If shrunk, radial thickness around eyeholes **228 mm** Are dowel pins fitted? **no** Crankshaft material Journals **SM steel** Approved **45 kg/mm²**
 Webs _____ Tensile strength _____

Diameter of flywheel **3000 mm** Weight **7500 kg** Are balance weights fitted? **yes** Total weight **WD² 4250 kgm²** Radius of gyration _____
 Diameter of flywheel shaft _____ Material _____ Minimum approved tensile strength _____

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



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 made 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 Maker's testbed and all found satisfactory.

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

A.C. Buijze
A.C. Buijze.
 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.)

Piston-RODS Lloyds ANT Nos. 2719/20/21/23/24/25/72 16/7, 27/10'59 JN

connecting-rods Lloyds DSF Nos. 757 - 825 - 826 - 827 - 828 - 843 - 844 - 7/5, 27/5, 1/6 H.S.

CRANKSHAFT ~~XXXXXXXXXX~~ Lloyds Got. Nos. 2006 - 2007 N.F. 17/9'59

FLYWHEEL SHAFT

THRUSTSHAFT Lloyd's DTM GN 225 28/8'59 AB 28/10'59

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 1/12-59 Straight shafting Gearing Clutch

Separate oil fuel tanks Pumping arrangements Oil fuel arrangements

Cargo oil pumping arrangements Air receivers 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 8/3-60

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

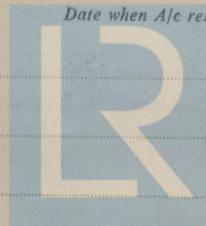
Oil fuel lines Donkey boiler supports Steering machinery Windlass

Date of Committee FRIDAY - 2 DEC 1960 Special Survey Fee f. 3015,--

Decision See Rpt. 1. turnover tax " 130,83

Expenses " 125,--

Date when A/c rendered © 2020/1960



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