

Rpt. 4b

Date of writing report 23-5-1960

Received London

Port of Amsterdam

No.

Survey held at Hengelo

No. of visits

In shops 14

First date

22/10-1959

Last date

4/5-1960

## 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 \_\_\_\_\_

Donkey boilers made at \_\_\_\_\_ By \_\_\_\_\_

Machinery installed at \_\_\_\_\_ By \_\_\_\_\_

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 \_\_\_\_\_ RPM of propeller.

Corresponding MIP 7,68 kg/cm<sup>2</sup> (For DA engines give MIP top & bottom) Maximum cylinder pressure 55 kg/cm<sup>2</sup> 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/cm<sup>2</sup> 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 &amp; 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 m<sup>3</sup> No. and total area of explosion reliefdevices 14 - 6860 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? 12 hours

CRANK &amp; FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 25/2-60 State barred speed range(s), if imposed

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/mm<sup>2</sup>

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

If shrunk, radial thickness around eyeholes 228 mm Are dowel pins fitted? no Crankshaft material Journals SM steel Approved 45 kg/mm<sup>2</sup>Diameter of flywheel 3000 mm Weight 7500 kg Are balance weights fitted? yes Total weight WD<sup>2</sup> 4250 kgm<sup>2</sup> 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.

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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, ~~this~~ 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 chocks & 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

Decision

See Apt. 1.

Special Survey Fee

f. 3015,—

turnover tax

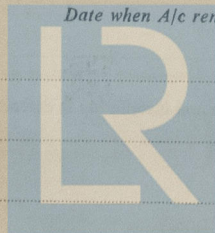
" 130,83

Expenses

" 125,—

Date when A/c rendered

26/6/1960



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