

Rpt. 4b

-2. NOV. 1961

187162

Date of writing report 30-11-1960 Received London Port Copenhagen No. 187162
 Survey held at Copenhagen No. of visits 31 In shops 10-8-1960 First date 30-11-1960 Last date
 On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name Gross tons
 Owners Managers Port of Registry Year Month
 Hull built at Gorinchem, Holland By Bijkers Aannemingsbedrijf Yard No. 163 When
 Main Engines made at Copenhagen By Burmeister & Wain A/S Eng. No. 7109 When 1960-11
 Gearing made at By
 Donkey boilers made at By Blr. Nos. When
 Machinery installed at Gorinchem, Holland By Bijkers Aannemingsbedrijf 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? yes 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 1 No. of propellers 1 Brief description of propulsion system Reversible, heavy oil eng. Direct to propeller

MAIN RECIPROCATING ENGINES. Licence Name and Type No. B&W-DM.550VTBF-110, Turbocharged, crosshead type, solid injection.

No. of cylinders per engine 5 Dia. of cylinders 500 mm stroke 1100 mm 2 or 4 stroke cycle 2 Single or double acting single

Maximum approved BHP per engine 2900 at 170 RPM of engine and 170 RPM of propeller.

Corresponding MIP 8.0 kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 55 kg/cm² Machinery numeral 580

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? valve in cover No. and type of mechanically driven scavenge pumps or blowers per engine and how driven none

No. of exhaust gas driven scavenge blowers per engine 2 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 electrically No. of scavenge air coolers 2 Scavenge air pressure at full power 0.42 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 2 Inlet port in cylinder Exhaust 1 Starting 1 Safety 1

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 fuel oil Overall diameter of piston rod for double acting engines

Is the 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? yes Is the engine of crosshead or trunk piston type? cross-head Total internal volume of crankcase 34.5 m³ No. and total area of explosion relief

devices 6-1995 cm² Are flame guards or traps fitted to relief devices? no 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 compr. 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? 6 hours

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 11-8-60 State barred speed range(s), if imposed
 Not to be operated continuously between 105 and 124 RPM for working propeller 105 and 124 RPM 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 6 Are main bearings of ball or roller

type? no Distance between inner edges of bearings in way of crank(s) 660 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines

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

Diameter of journals 400 mm Diameter of crankpins 150 mm Centre 400 mm Breadth of webs at mid-throw 860 mm Axial thickness of webs 224/196 mm
 115 mm centr. hole Side hole Pins SM-Steel Minimum

If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals SM-Steel Approved 44 kg/mm²

Webbs SM-Steel Tensile strength

WD² of flywheel 6600 kgm² Weight Are balance weights fitted? yes Total weight 5680 kgm² Radius of gyration

Diameter of flywheel shaft 380 mm Material SM-Steel Minimum approved tensile strength 44 kg/mm²

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

© 2020

Lloyd's Register
Foundation

004866-004872-0053 1/2

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.

The above machinery is built under special survey in accordance with the Rules, the approved plans and the Secretary's letters.

The material used has been tested as required by the Rules, the workmanship is good. Crankcase explosion relief devices fitted in accordance with the Rules.

On completion the engine was tested under full power working condition in the shop. The regulator and manoeuvring of the engine was also tested and found good.

Recommend the machinery of this vessel to have notation of +LMC when installed in the ship under special survey.

It is stated that the ship is to have "Strengthening for Navigation in Ice Class 1"

NOTICE BOARED TO BE FITTED AT CONTROL STATION

Note: The engine is not to operated continuously between 105 and 124 RPM.

TACHOMETER MARKED,

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	Piston rods	3 off 2 off 1 off spare	Lloyd's Cpn. Nos. 5823 5824	VL 27-10-60
	Connecting rods	4 off 1 off	Lloyd's Cpn. Nos. 5784-5785	VL 30-9-60
CRANKSHAFT	CRANKSHAFT	1 off 1/1 length	Lloyd's Cpn. No. 5789	VL 4-10-60
CRANKSHAFT				
THRUSTSHAFT		1 off	Lloyd's Cpn. No. 5790	VL 4-10-60
GEARING				
INTERMEDIATE SHAFTS				
SCREW AND TUBE SHAFTS				
PROPELLERS				
OTHER IMPORTANT ITEMS	Crossheads	5 off	Lloyd's Cpn. No. 5786	VL 30-9-60
	Cylinder Covers:	5 off 2 off spare	Lloyd's Test Cpn. 10 Atm.	VL 18-10-60
	Cylinder Liners & Jackets:	5 off	Lloyd's Test Cpn. 7 Atm.	VL 21-10-60
	Pistons:	5 off 1 off spare	Lloyd's Test Cpn. 5 Atm.	VL 27-10-60

Is the installation a duplicate of a previous case?

If so, state name of vessel

Date of approval of plans for crankshaft	15-7-1960	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:—

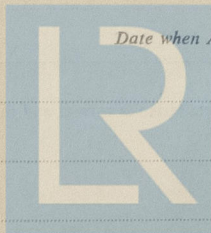
Fitting of stern tube	Fitting of propeller	Completion of sea connections	Alignment of crank shaft in main bearings
Engine chocks & bolts	Alignment of gearing	Alignment of straight shafting	Testing of pumping arrangements
Oil fuel lines	Donkey boiler supports	Steering machinery	Windlass

Date of Committee	IFRIDAY 1-DEC 1961	Construction	Special Survey Fee Kr.	3480.-
Decision	See Ref 52553	Forging	Kr.	510.-
		Pump & Cooler	Kr.	400.-

Expenses

ENTERED IN COPENHAGEN ROUGH FEE BOOK ON THE

Date when A/c rendered



Lloyd's Register Foundation