

Rpt. 4b L.R. 942f

23 DEC 1963

Date of writing report 2.12.63 Received London Köln Port Köln No. 887
In shops 6 First date 18.9.63 Last date 21.10.63
Survey held at Köln-Deutz No. of visits 6 On vessel
B.N. 1.8357.0.7096

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name Gross tons
Owners Managers Port of Registry
Hull built at Lemwerder i.o. By Abeking & Rasmussen Yard No. 5894 Year Month
Main Engines made at Köln-Deutz By Klöckner-Humboldt-Deutz AG Eng. No. 3681460-471 When 10.63
Gearing made at By Gear No. When
Aux./donkey boilers 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
If ship is to be classed for navigation in ice, state whether Class 1, 2 or 3 Is ship an oil tanker?
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 should 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 all other relevant particulars must be given and the port and report number should be stated.

No. of main engines two No. of propellers Brief description of propulsion system crankshaft - flywheel - reversing gear
MAIN RECIPROCATING ENGINES. Licence Name and Type No. one airless injection heavy oil SBF12M 716
No. of cylinders per engine 12 Dia. of cylinders 135 mm stroke(s) 160 mm 2 or 4 stroke cycle 4 Single or double acting single
Service B.H.P. 320 Maximum BHP per engine approved for this installation 500 at 1300 RPM of engine and 1500 RPM of propeller.
Corresponding MIP 9.66 kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 85 kg/cm² Machinery numeral 64
Are the cylinders arranged in Vee or other special formation? 120° Vee If so, number of crankshafts per engine one

TWO STROKE ENGINES. Is the engine of opposed piston type? 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? 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?
If a stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full power
Are scavenge manifold explosion relief valves fitted?

TWO AND FOUR STROKE ENGINES. Is the engine supercharged? yes Are the undersides of the pistons arranged as supercharge pumps? no No. of exhaust gas driven blowers per engine two No. of supercharge air coolers per engine none Supercharge air pressure at full load Can engine operate without supercharger? yes
No. of valves per cylinder: Fuel 1 Inlet 1 Exhaust 1 Starting none Safety none
Material of cylinder covers cast iron Material of piston crowns aluminium Is the engine equipped to operate on heavy fuel oil? no
Cooling medium for: Cylinders water Pistons Fuel valves Overall diameter of piston rod for double acting engines
Is the rod fitted with a sleeve? no 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 363 ltrs. No. and total area of explosion relief devices none Are flame guards or traps fitted to relief devices? no Is the crankcase readily accessible? no If not, must the engine be removed for overhaul of bearings, etc? yes Is the engine secured directly to the tank top or to a built-up seating? How is the engine started? electrically
Can the engine be reversed? no If not, how is reversing obtained? reversing gear
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 12.7.63 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? yes
Where positioned? opposite flywheel Type Holset damper No. of main bearings 7 Are main bearings of ball or roller type? Distance between inner edges of bearings in way of crank(s) 5x173.4mm 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 110 mm Diameter of crankpins Centre 92 mm Breadth of webs at mid-throw 154 mm Axial thickness of webs 36 mm
Side Pins) Minimum Y.P. 60 kg/mm²
If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material: Journals) Cr. steel Approved 23.9.58
Webs) Tensile strength 80 kg/mm²
Diameter of flywheel 600 mm Weight 26.1 kg Are balance weights fitted? yes Total weight 55kg, 582gr Radius of gyration 7x98.48 mm
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 constructed under special survey of tested materials and is in accordance with the Secretary's letters, approved plans and Rules Requirements. The materials and workmanship are good and the engine, when tested in the shops under full and overload conditions was found to function satisfactorily. The governor tests were also found satisfactory. This engine, in my opinion, is suitable for main propelling purposes and when satisfactorily installed and reported will be eligible to receive the notation * LMC (with date).

H. Lubke
 H. LUBKE
 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.)

Conn. RODS LLOYD'S KLN. 260/13-24 H.D. 18.9.63

CRANKSHAFT ~~OR ROTARY~~ LLOYD'S KLN. 195 K.B. 22.5.63

FLYWHEEL SHAFT -

THRUSTSHAFT -

GEARING -

INTERMEDIATE SHAFTS -

SCREW AND TUBE SHAFTS -

PROPELLERS -

OTHER IMPORTANT ITEMS superchargers: 1603/04 LLOYD'S Mhm KS 1.8.63 KS
 1613/14 LLOYD'S Mhm KS 30.9.63 KS

Is the installation a duplicate of a previous case? yes If so, state name of vessel KLN. Rpt. 855, Engine No. 3528573-8

Date of approval of plans for crankshaft 23.9.58 Straight shafting Gearing Clutch

Separate oil fuel tanks Pumping arrangements Oil fuel arrangements

Cargo oil pumping arrangements Air receivers Aux./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

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 30 OCT 1964 Special Survey Fee DM. 588.-

Decision See Bmn 7189 Runn. Test DM. 100.-

Expenses DM. 69.-

