

Rpt. 4b L.R. 747

Date of writing report 8.5.61

Received London

Port Köln

-2 NOV. 1961

29. MAY 1961

Survey held at Köln-Deutz

No. of visits In shops 11

First date 9.1.61

No. 630

Last date 22.3.61

B.N. 1.8648.5.7010

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 41556

Name

"TORO"

Gross tons 512

signee Owners A. Kracko Ltd., London

Managers

Port of Registry

Hull built at Leith/Edinburgh

By Henry Robb Ltd.

Yard No. 481 E

Year Month

Main Engines made at Köln-Deutz

By Klöckner-Humboldt-Deutz AG

Eng. No. 2752055-62

When 1961

When 3.61

Gearing made at

By

Blr. Nos.

When

Machinery installed at Leith

By

Henry Robb Ltd

When 1961

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 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

engine - flywheel - intermediate shaft-shafting

MAIN RECIPROCATING ENGINES. Licence Name and Type No.

one airless injection heavy oil RV8M 545

No. of cylinders per engine 8

Dia. of cylinders 320 mm

stroke(s) 450 mm

2 or 4 stroke cycle 4

Single or double acting single

Maximum approved BHP per engine 660

at 380

RPM of engine and

RPM of propeller.

Corresponding MIP 6.54 kg/cm²

(For DA engines give MIP top & bottom)

Maximum cylinder pressure

64 kg/cm²

Machinery numeral

132

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?

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?

FOUR STROKE ENGINES. Is the engine supercharged? no

Are the undersides of the pistons arranged as supercharge pumps? no

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 1

Inlet 1

Exhaust 1

Starting 1

Safety 1

Material of cylinder covers cast iron

Material of piston crowns

cast iron

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?

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 3.52 m³

No. and total area of explosion relief

devices 4, area 380cm²

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? with 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

Prov. London letter dd. 17.2.1961

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? front, pumpside

Type friction

No. of main bearings 10

Are main bearings of ball or roller

type? no

Distance between inner edges of bearings in way of crank(s) 346 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 220 mm

Diameter of crankpins

Centre 210 mm

Breadth of webs at mid-throw 350 mm

Axial thickness of webs 93 mm

If shrunk, radial thickness around eyeholes

Are dowel pins fitted?

Crankshaft material Journals carbon steel

Minimum Y.P. 35 kg/mm²

Approved 17.2.55

Webs

Tensile strength 65 kg/mm²

Diameter of flywheel 1500 mm

Weight 3300 kg

Are balance weights fitted? no

Total weight

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

014887 - 014898 - 0374 1/2

(all words not applicable).
 ✓ *Handwritten signature*
 Lloyd's Register
 Foundation
 Klöckner-Humboldt-Deutz
 Aktiengesellschaft

0374 2/2

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.

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).

Engine 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. 959/1/2/4/6/5/8/9/10/H.D. 3.2.61

CRANKSHAFT OR ROTOR SHAFT

LLOYD'S DSF JL 494/1.8.60

FLYWHEEL SHAFT

THRUST SHAFT

GEARING

INTERMEDIATE SHAFTS

LLOYD'S KLN. 951/H.D. 22.3.61

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

oil cooler: 1-6848-5-7010/LLOYD'S Mhm WP 5/4 kg/cm² TP 10/8 kg/cm² HW 2.2.6

air receivers: 21698/LLOYD'S TEST HNO. TP 60 kg/cm² WP 30 kg/cm² 25.11.60 FK

21482/LLOYD'S TEST HNO. TP 60 kg/cm² WP 30 kg/cm² 19.10.60 CS

21918/LLOYD'S TEST HNO. TP 60 kg/cm² WP 30 kg/cm² 17. 1.61 CS

Is the installation a duplicate of a previous case? yes

If so, state name of vessel

KLN. Rpt. 582; Engine No. 2751815

Date of approval of plans for crankshaft 17.2.55

Straight shafting

Gearing

Clutch

Separate oil fuel tanks

Pumping arrangements

Oil fuel arrangements

Cargo oil pumping arrangements

Air receivers 29.3.56

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

Special Survey Fee

DM 725.-

Decision

Runn. Test

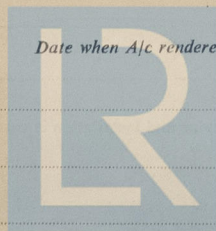
DM 100.-

Expenses

DM 83.-

Date when A/c rendered

21.4.61; A/C R 4442



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