

Rpt. 4b (Cons) REPORT ON MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE

Received London

28. JAN. 1966

L.R. 1130a

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

358

Ship's Name

Port K Ö L N

Gross tons

Date of completing rpt. 18.11.65

Rpt. No. 1069

Place of survey, if different from above Klöckner-Humboldt-Deutz AG, Köln-Deutz

No. of visits in shops 10

First date 14.6.65

Last date 30.8.65

Ship built by Amels-Makkum

Yard No. 286

Engine made by Klöckner-Humboldt-Deutz A.G. Köln-Deutz

Engine No. 4300447- When 1965 8.

Fee DM. 2020.-

Expenses - 545

Licence name & type of engine one oil engine type RBV8M545

If cyls in vee or other special formation state (a) vee angle and (b) No. of crankshafts each engine (a) not appl. (b)

No. of engines

BHP on which fees have been calculated 1412

2 or 4 stroke cycle 4

Single (SA), or opposed piston (OP) SA

Corresponding RPM 380

No. of cylinders, each engine 8

Corresponding MIP 13.87 kg/cm²

Diameter of cylinders 320 mm

Maximum cylinder pressure 84 kg/cm²

Stroke(s) 450 mm

Machinery numeral 264

TWO STROKE ENGINES ONLY

Is engine of opposed piston type?

Is the exhaust discharged through ports in the cylinders or valve(s) in the cylinder covers?

If so, how are upper pistons connected to crankshaft?

not applicable

No. and type of mechanically driven scavange pumps or blowers, each engine, and how driven

Where exhaust gas driven blowers only are fitted can engine operate with one out of action?

Are the under sides of pistons used as scavange pumps?

If not, and emergency means are provided, what are they?

Are relief valves fitted to scavange manifold?

Scavange air pressure at full power

TWO & FOUR STROKE ENGINES

Is the engine supercharged? yes

Is welded construction used for:

BEDPLATE? no

FRAMES? no

ENTABLATURE? no

No. of exhaust gas driven supercharge blowers, each engine one

Are tie-bolts fitted? yes

No. and type of mechanically driven charging pumps or blowers, each engine none

Is crankcase separated from under sides of pistons? no

Are the under sides of pistons used as supercharge pumps? How driven? no

Is engine of crosshead or trunk piston type? trunk

No. of supercharge air coolers, each engine one

Is crankcase readily accessible? yes

Supercharge air pressure at full power 0.82 kg/cm²

If not, must engine be removed for overhaul of bearings, &c.? not appl.

Can engine operate without supercharger? yes

Total internal volume of crankcase 3.52 m³

If not, and emergency means are provided, what are they? not appl.

No. and total area of explosion relief devices 8,760 cm²

Are flame guards or traps fitted to: Crankcase relief devices? yes

Starting air pipes at cyl. starting air valves? one bursting disc for each cyl.

Can engine be reversed? yes

If not, how is propeller reversal effected? not appl.

| No. of valves each cylinder: | INLET | EXHAUST |
|------------------------------|--------|----------|
| | 1 | 1 |
| | FUEL | STARTING |
| | 1 | 1 |
| | RELIEF | |
| | 1 | |

Cooling medium for: CYLINDERS water

PISTONS FUEL VALVES none

Material of Cylinder covers cast iron
Piston crowns aluminium

How is engine started? with air

Type of governor fitted KHD

How long has the engine been tested at full power in the shop? 4 1/2 hours

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10m,9/64 (MADE AND PRINTED IN ENGLAND)

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| | | | | |
|--|--------------------------------|---|--|--|
| Is a torsional vibration damper or detuner fitted? | yes | Date of approval of torsional vibration characteristics of engine/flywheel system | 24.8.1965 | |
| Where positioned | pumpside | | | |
| Type | friction | | | |
| CRANKSHAFT | | | | |
| Total weight of balance wts. | none | Breadth of webs at mid-throw | 370 mm | |
| Radius of gyration | not appl. | Axial thickness of webs | 100 mm | |
| No. of main bearings | 10 | If webs shrunk, radial thickness round eye-holes | not appl. | |
| Are main bearings of ball or roller type? | no | Nominal shrinkage allowance if dowel pins are not fitted | not appl. | |
| Distance between inner edges of bearings in way of cranks | 349 mm | Material of: (State whether cast or forged) | Pins } Webs } forged Journals } | |
| Distance between centre lines of side rods of opp. piston engines | not appl. | | | |
| Built, semi-built or solid crankshaft | solid | | | |
| Diameter of: | Journals | 220 mm | Minimum approved tensile strength for: | Pins } Webs } 70 kg/mm ² Journals } |
| | crank crank pins | 210 mm | | |
| | rod crank pins | | | |
| FLYWHEEL SHAFT. Separate, integral with crank or thrust shaft | | Flywheel | Diameter | 220 mm |
| Material | integral with crankshaft | | Diameter | 1500 mm |
| | | | Weight | 3300 kg |
| Minimum approved tensile strength | | | | |
| THRUST SHAFT. Separate, integral with crank or flywheel shaft | | Material | | |
| Diameter adjacent to collar | | Minimum approved tensile strength | | |

MAIN ENGINE DRIVEN PUMPS (each engine. State No. and purpose of each pump and, for bilge pumps, the capacity at normal r.p.m.) also **AIR COMPRESSORS** (No. and whether they can be declutched)

1 fuel lift; 1 lub. oil pump;
1 compressorm which can not be declutched.

DECLARATION TO BE SIGNED BY ENGINE BUILDERS

To the best of our knowledge this machinery has been soundly constructed in conformity with the Rules, Regulations and requirements of Lloyd's Register of Shipping, and the foregoing particulars of main engines are correct.

(date)

(signature)

A previous similar case was for M.S. No. 129

Engine No. 4300407-414

Port and Report No. Köln Rep. 1055

IDENTIFICATION MARKS of important forgings and castings. (Copies of certificates to be forwarded)

Crankshaft

LLOYD'S DSF 266
GH 29.3.65

Piston & connecting rods LLOYD'S KLN. 546 HD 16.6.65

Thrust/flywheel shaft

intermd. shaft: LLOYD'S KLN. 185 KW 3.9.65 HL.

AIR RECEIVERS if supplied with engine. (Copies of certificates to be forwarded)

Port & Cert. No. Hannover Cert. HNO.C.65/730, 729, 588

Dates of approval of plans

CRANKSHAFT
7.8.64

THRUST/FLYWHEEL SHAFT

AIR RECEIVERS
HAM. 15.1.65

The machinery reported above has been built under Special Survey in accordance with the Rules, approved plans and Secretary's letters, examined running on the test bed and found satisfactory. The materials and workmanship are good, the spare gear required by the Rules has been supplied and the machinery is eligible, in my opinion, to be fitted in a classed ship.

Date of Committee

FRIDAY 11 FEB 1966

Minute

See Rpt. 1.

Surveyor to Lloyd's Register of Shipping

Note.—Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.

Lloyd's Register
Foundation