

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

Received London

28. JAN. 1965

L.R. 1130a

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

358

PLEASE RETURN THIS REPORT WITH YOUR FIRST ENTRY. NOTE:—The particulars in this report are to 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. Wordings not applicable to be cancelled.

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. **4300447-454** Yr. | Mo. **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 **not appl.**
 No. of engines _____
 2 or 4 stroke cycle **4** BHP on which fees have been calculated **1412**
 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? _____
 If so, how are upper pistons connected to crankshaft? _____
 No. and type of mechanically driven scavenger pumps or blowers, each engine, and how driven _____
 Where exhaust gas driven blowers only are fitted can engine operate with one out of action? _____
 If not, and emergency means are provided, what are they? _____
 Are the under sides of pistons used as scavenger pumps? _____
 Are relief valves fitted to scavenger manifold? _____
 Scavenger air pressure at full power _____

TWO & FOUR STROKE ENGINES

Is the engine supercharged? **yes**
 No. of exhaust gas driven supercharge blowers, each engine **one**
 No. and type of mechanically driven charging pumps or blowers, each engine **none**
 Are the under sides of pistons used as supercharge pumps? How driven? **no**
 No. of supercharge air coolers, each engine **one**
 Supercharge air pressure at full power **0.82 kg/cm²**
 Can engine operate without supercharger? **yes**
 If not, and emergency means are provided, what are they? **not appl.**
 Is welded construction used for:

BEDPLATE?	FRAMES?	ENTABLATURE?
no	no	no

 Are tie-bolts fitted? **yes**
 Is crankcase separated from under sides of pistons? **no**
 Is engine of crosshead or trunk piston type? **trunk**
 Is crankcase readily accessible? **yes**
 If not, must engine be removed for overhaul of bearings, &c.? **not appl.**
 Total internal volume of crankcase **3.52 m³**
 No. and total area of explosion relief devices **8,760 cm²**
 Are flame guards or traps fitted to:

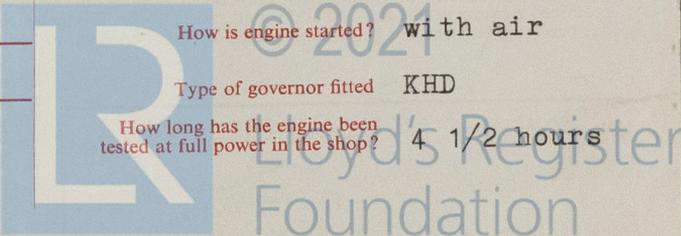
Crankcase relief devices?	yes
Starting air pipes at cyl. starting air valves?	one bursting disc for each cyl.

 Can engine be reversed? **yes**
 If not, how is propeller reversal effected? **not appl.**
 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**

No. of valves each cylinder:	INLET	EXHAUST
	1	1
Cooling medium for:	FUEL	FUEL VALVES
	1	none
PISTONS	STARTING	
	1	none

Material of

Cylinder covers	cast iron
Piston crowns	aluminium



012333-012339-0020

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	Minimum approved tensile strength for:	Pins } Webs } 70 kg/mm² Journals }
	crank pins		
	crank pins		

FLYWHEEL SHAFT. Separate, integral with crank or thrust shaft) integral with crankshaft Material))	Flywheel	Diameter	220 mm
Minimum approved tensile strength			Diameter	1500 mm
			Weight	3300 kg

THRUST SHAFT. Separate, integral with crank or flywheel shaft **separate**

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) **X** **Klöckner-Humboldt-Deutz**
 (signature) **Aktiengesellschaft**

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)

Piston & connecting rods	LLOYD'S KLN. 546 HD 16.6.65	Crankshaft	LLOYD'S DSF 266 GH 29.3.65
intermd. shaft:	LLOYD'S KLN. 185 KW 3.9.65 HL.	Thrust/flywheel shaft	

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 Rep-1.**

Lloyd's Register
 Foundation
 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.