

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

Received London

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

-6 MAY 1966

Ship's Name m.s. "ALTEFAHR".

Port Groningen.

Gross tons 299.43 Date of completing rpt. 30-4-66

Rpt. No. 4017b

Place of survey, if different from above Martenshoek

No. of visits in shops/ 5 First date 27-10-65 Last date 18-11-65
+ on board.

Ship built by Scheepswerf Hoogezand N.V.

Yard No. 128

Engine made by VEB Schwermaschinebau
"Karl Liebknecht", Magdenburg.

Engine No. 83594 Yr. Mo. When 1965 11

Fee -

Expenses -

Licence name & type of engine	6 NVD48U	If cys in vee or other special formation state (a) vee angle and (b) No. of crankshafts each engine (a) - (b) -		
No. of engines	one	BHP on which fees have been calculated	540	
2 or 4 stroke cycle	4 SCSA	Corresponding RPM	375	
Single (SA), or opposed piston (OP)	SA	Corresponding MIP	5.6 kg/cm ²	
No. of cylinders, each engine	6	Maximum cylinder pressure	55 kg/cm ²	
Diameter of cylinders	320 mm.	Machinery numeral	108	
Stroke(s)	480 mm.	Is the exhaust discharged through ports in the cylinders or valve(s) in the cylinder covers? -		
TWO STROKE ENGINES ONLY				
Is engine of opposed piston type?	-	Are the under sides of pistons used as scavenge pumps? -		
If so, how are upper pistons connected to crankshaft?	-	Are relief valves fitted to scavenge manifold? -		
No. and type of mechanically driven scavenge pumps or blowers, each engine, and how driven	-	Scavenge air pressure at full power -		
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?	-			
TWO & FOUR STROKE ENGINES				
Is the engine supercharged?	no.	Is welded construction used for:	BEDPLATE? no.	FRAMES? no. ENTABLATURE? no.
No. of exhaust gas driven supercharge blowers, each engine	-	Are tie-bolts fitted? yes		
No. and type of mechanically driven charging pumps or blowers, each engine	-	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	-	Is crankcase readily accessible? yes		
Supercharge air pressure at full power	-	If not, must engine be removed for overhaul of bearings, &c.? no.		
Can engine operate without supercharger?	-	Total internal volume of crankcase 2820 ltrs.		
If not, and emergency means are provided, what are they?	-	No. and total area of explosion relief devices 6 x 75 cm ²		
		Are flame guards or traps fitted to: { Crankcase relief devices? yes		
		{ Starting air pipes at cyl. starting air valves? H.G.pipes.		
		Can engine be reversed? yes		
		If not, how is propeller reversal effected? -		
		How is engine started? compr.air.		
		Type of governor fitted mechanical		
		How long has the engine been tested at full power in the shop? 24 hours. acc.Manuf. test report.		
No. of valves each cylinder:	INLET one EXHAUST one			
	FUEL one STARTING one RELIEF one			
Cooling medium for:	CYLINDERS F.W.			
	PISTONS none FUEL VALVES none			
Material of {	Cylinder covers C.i.			
	Piston crowns C.i.			

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. Wording not applicable to be cancelled.

10m,8'65 (MADE AND PRINTED IN ENGLAND)

012679-012704-0126

Is a torsional vibration damper or detuner fitted? yes		Date of approval of torsional vibration characteristics of engine/flywheel system	
Where positioned Forward end of shaft.			
Type Viscosity.			
CRANKSHAFT			
Total weight of balance wts.	none	Breadth of webs at mid-throw	336 mm.
Radius of gyration	-	Axial thickness of webs	91 mm.
No. of main bearings	8	If webs shrunk, radial thickness round eye-holes	-
Are main bearings of ball or roller type?	Plain	Nominal shrinkage allowance if dowel pins are not fitted	-
Distance between inner edges of bearings in way of cranks	385 mm.	Material of: (State whether cast or forged)	Pins 31.0 - 57.5
Distance between centre lines of side rods of opp. piston engines	-		Webs 34.5 - 61.9
Built, semi-built or solid crankshaft	solid		Journals 25.6 - 24.3
Diameter of:	Journals	Minimum approved tensile strength for:	Pins
	Centre crank pins		Webs
	Side crank pins		Journals
FLYWHEEL SHAFT. Separate, integral with crank or thrust shaft		Integral	Diameter 1250 mm.
Material		-	Diameter -
Minimum approved tensile strength		-	Weight GD² = 2200 kgm.
THRUST SHAFT. Separate, integral with crank and flywheel shaft		Integral	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)

6 F.O. pumps.
1 L.O. pump.
One compressor (cannot be declutched) 29.6 m³/h.

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. **"SELLIN"**

Engine No. **83458**
Port and Report No. **Groningen .3072b**

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

Piston & connecting rods

DSRK.
3111/1053/774

~~Thrust/flywheel shaft~~

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

Port & Cert. No.

CRANKSHAFT

THRUST/FLYWHEEL SHAFT

AIR RECEIVERS

Dates of approval of plans

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 vessel 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 27 MAY 1966**

Minute

See Rpt. 1.

J. Baart.

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.