

REPORT ON AUXILIARY INTERNAL COMBUSTION RECIPROCATING ENGINES

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

Ship's Name (or contract No.) **m.s. "BARTH"** Port **Groningen**  
 Gross tons **499.02** Date of completing rpt. **21-1-66** Rpt. No. **3078d.**  
 Place of survey, if different from above **Lemmer**  
 No. of visits in shops **4** First date **30-11-65** Last date **6-12-65**  
 Ship built by **Scheepswerf "Friesland" N.V.** Yard No. **286/41**  
 Aux. engines made by **Lemmer.** Eng. No. **GA1-80738** When **1965**  
**VEB dieselmotorenwerk Leipzig, East Germany.** **GA1-80739** **1965**  
 Fee **--** Expenses **--**

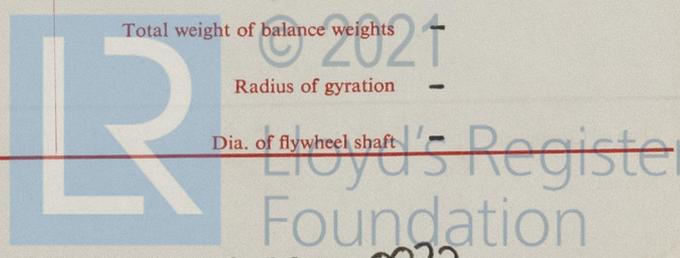
Description (including type name) **4 NVD 21** No. of sets **2**

No. of cylinders, each engine	<b>4</b>	No. of exhaust gas driven blowers/superchargers, each engine	<b>none</b>
Dia. of cylinders	<b>150 mm.</b>	Is welded construction used for	Bedplate? <b>no.</b>
Stroke	<b>210 mm.</b>		Entablature? <b>no.</b>
2 or 4 stroke cycle	<b>4</b>	Total internal volume of crankcase, if 20 cu.ft. or over	<b>less 20 cu.ft.</b>
Approved service B.H.P., each engine	<b>90</b>	Crankcase explosion relief devices	No. <b>-</b>
Corresponding R.P.M.	<b>1000</b>		Total area <b>-</b>
Corresponding M.I.P.	<b>5.5 kg/cm<sup>2</sup></b>	Are flame guards or traps fitted to relief devices?	<b>no.</b>
Maximum cyl. pressure	<b>63 kg/cm<sup>2</sup></b>	Cooling medium for	Cylinders <b>FW</b>
Fuel	<b>diesel</b>		Pistons <b>-</b>
			Fuel valves <b>-</b>
If cylinders in vee or other special formation, state	Angle of vee No. of crankshafts, each engine	No. of attached pumps	F.W. COOLING <b>one</b>
	<b>-</b>		S.W. COOLING <b>one</b>
Is engine of opposed piston type?	<b>no.</b>		LUB. OIL <b>one</b>
No. and type of mechanically driven scavenge pumps/blowers, each engine	<b>none</b>	How is engine started?	<b>compressed air.</b>

SHAFTING

Is a damper or detuner fitted?	<b>no.</b>	Webs	Dia. of journals	<b>96 mm.</b>
Type	<b>-</b>		Breadth at mid-throw	<b>150 mm.</b>
			Axial thickness	<b>53 mm.</b>
			If shrunk, radial thickness around eyeholes	<b>-</b>
No. of main bearings	<b>5</b>	Nominal shrinkage allowance if dowel pins are not fitted	<b>-</b>	
Are bearings of ball or roller type?	<b>no.</b>	Flywheel	Diameter	<b>640 mm.</b>
Distance between inner edges of bearings in way of cranks	<b>-</b>		Weight	<b>174 kg.</b>
Is crankshaft built, semi-built or solid?	<b>solid</b>	Are balance weights fitted?	<b>no.</b>	
Material of crankshaft	<b>40 Mn.4N</b>	Total weight of balance weights	<b>-</b>	
Minimum approved tensile strength	<b>-</b>	Radius of gyration	<b>-</b>	
Dia. of crankpins	<b>96 mm.</b>	Dia. of flywheel shaft	<b>-</b>	

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.



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Has each engine been tested in the shop? **yes**      Was it tested with driven machinery attached? **yes**  
 How long at full power? **3 hours.**      Was the governing tested and found satisfactory? **yes**

DATE OF APPROVAL OF TORSIONAL VIBRATION CHARACTERISTICS  
 (If 150 B.H.P. or over)

PARTICULARS OF DRIVEN MACHINERY

elec.generator alternating current 70 KVA  
 390 V-104 Amps, cosφ 0.8

PORT & No. OF CERTIFICATES FOR STARTING AIR RECEIVERS

-

ELECTRIC GENERATORS (Copies of certificates to be forwarded)

If 100 kW or over	Port	-	If less than 100 kW, have makers' certificates been supplied?	<b>yes</b>
	No. of cert.	-		

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 auxiliary sets are correct.

(date) -

(signature) -

DATES OF APPROVAL OF PLANS

-

IDENTIFICATION MARKS ON SHAFTING

-

A previous similar case was for (name or contract No.) -

Engine No. -

Rpt. No. -

The machinery reported above has been constructed ~~XXXX XXXX XXXX~~ in accordance with the Rules, ~~XXXX XXXX XXXX~~ Secretary's letters. 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.

*M.Th. Putting.*  
 M.Th. Putting.

Surveyor to Lloyd's Register of Shipping

DECLARATION TO BE COMPLETED AND SIGNED BY THE SURVEYOR AT THE PORT OF INSTALLATION

The above machinery has been fitted in **m.s. "BARTH"**

at **Lemmer, Holland**

in a proper manner and found satisfactory

when tested on (date) **29-11-65**

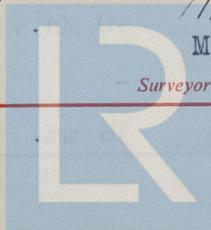
under full working conditions.

*M.Th. Putting.*  
 M.Th. Putting.

Surveyor to Lloyd's Register of Shipping

Date of Committee **FRIDAY 11 FEB 1966**

Minute **See Rpt. 1.**



Lloyd's Register Foundation

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.