

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 2070.

NOV 17 1938

Received at London Office

Date of writing Report 9<sup>th</sup> February 1938 When handed in at Local Office 14. 2. 1938. Port of Bremen / Hamburg.No. in Survey held at Mannheim. Date, First Survey 16<sup>th</sup> Nov 1937 Last Survey 3<sup>rd</sup> Feb. 1938  
Reg. Book. Number of Visits 6.73256 on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel TANKER DIALA Tons { Gross 8106 Net 4781

Built at Bremen / Vegesack By whom built Bremer Vulkan 19. Yard No. 757 When built 1938.

Owners Mem. Anglo - Saxo - Petroleum Co Port belonging to London

Oil Engines made at Mannheim By whom made Mem. Motoren Werke N. H. Contract No. 50103 When made 1938

Generators made at Dresden By whom made Mem. Sachsenwerk Contract No. ✓ When made 1937/38

No. of Sets 1 Engine Brake Horse Power 28 Nom. Horse Power as per Rule 10 Total Capacity of Generators 16 Kilowatts.

OIL ENGINES, &amp;c. Type of Engines R. H. 326 Z 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 atn Diameter of cylinders 175 mm Length of stroke 260 mm No. of cylinders 2 No. of cranks 2

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 216 mm. Is there a bearing between each crank yes

Revolutions per minute 390 Flywheel dia. 1200 mm Weight 1630 kg Means of ignition dir. injected Kind of fuel used gas oil on test bed

Crank Shaft, dia. of journals as per Rule ✓ as fitted 110 mm Crank pin dia. 110 mm Mid. length breadth 145 mm Thickness parallel to axis ✓

Flanged shaft as per Rule ✓ as fitted 110/80 mm Intermediate Shafts, diameter as per Rule ✓ as fitted ✓ Thickness of cylinder liners 12 mm

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced.

Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material ✓

Cooling Water Pumps, No. 1, rotary type, 1.5 tons Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Lubricating Oil Pumps, No. and size 1, 0.65 tons/4

Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

AIR RECEIVERS: Have they been made under Survey yes State No. of Report or Certificate Please Certificate attached

Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes

Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces by removal of battle cover.

Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. ✓ Cubic capacity of each ✓ Internal diameter ✓ thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓

Starting Air Receivers, No. 2 Total cubic capacity 1x 75 lb 1x 150 lb Internal diameter 255.2 mm thickness 5.9 mm

Seamless, lap welded or riveted longitudinal joint ✓ Material S. M. Steel Range of tensile strength 56/58.4 kg/mm Working pressure by Rules 46.3 atn 38.2 atn

ELECTRIC GENERATORS: Type V. G. 45

Pressure of supply 115 volts Full Load Current 139 Amperes Direct or Alternating Current direct current

If alternating current system, state the periodicity ✓ Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on and off yes

Generators, are they compounded as per rule yes is an adjustable regulating resistance fitted in series with each

shunt field yes Are all terminals accessible, clearly marked, and furnished with sockets ✓

Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched ✓ Are the lubricating arrangements of the generators as per Rule yes

If the generators are under 100 kw. full load rating, have the Makers supplied certificates of test ✓ and do the results comply with the requirements ✓

If the generators are 100 kw. or over have they been built and tested under survey ✓

PLANS. Are approved plans forwarded herewith for Shifting 25/8/1937 Receivers ✓ Separate Tanks ✓

SPARE GEAR As per Rules.

The foregoing is a correct description,

MOTOREN-WERKE MANNHEIM A. S.  
VORM. BENZ ABT. STATIONÄRE MOTORENBÄU

M. Kornbach.

Manufacturer.



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Dates of Survey while building { During progress of work in shops - 1937: November, 16, 24, 25 1938: Jan. 21, February 2, 3.  
During erection on board vessel - - -  
Total No. of visits 6.

Dates of Examination of principal parts - Cylinders 27/1/37, 3/2/38 Covers 16/1/37, 3/2/38 Pistons 3 Feb 1938 Piston rods ✓  
Connecting rods 3 Feb 1938 Crank and Flywheel shafts 21/1/38, 3/2/38 Flanged shaft 3 Feb 1938 Intermediate shafts

Crank and Flywheel shafts, Material Siemens-Martin-Steel Identification Marks Lloyd's No 12701 J.L. 8-II-37  
Flanged shaft Intermediate shafts, Material Siemens-Martin-Steel Identification Marks Lloyd's No 112 H.R.S. 15-II-37  
Dr. Generator Identification marks on Air Receivers 75 lb. Nos 996 Lloyd's Test 854 lbs. W.P. 422 lbs V.S. 4-10-37.  
150 lb. " 952 Lloyd's Test 854 lbs. W.P. 427 lbs H.B. 16-10-37.

Is this machinery duplicate of a previous case ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. This heavy oil auxiliary engine has been constructed under special survey in accordance with the requirements of the Rules and Regulations of Lloyd's Register of Shipping, the Secretary's letter and instructions thereto.

The material used in the construction has been made at works recognised by the Committee and tested by the local Society's Engineer with satisfactory results. This heavy oil auxil. engine, has been tested on Makers test during seven hours and was found to work satisfactorily.

After Test bed Trial this engine was opened up for inspection and all engine parts were found in good condition.

In my opinion the vessel for which this auxiliary engine is intended will be eligible for the notation of +H.M.B. (with date) when the whole Machinery has been satisfactorily fitted and covered off the vessel.

This engine has been satisfactorily installed on board and found in order in all parts.  
Witness M.M. 38  
S. Rammann

The Surveyors are requested not to write on or below the space for Committee Minute.

By whom account No. 7374  
The amount of Fee ... H.M. 120.00: When applied for, 18.2.1938.  
bed test trial. 42.00  
Travelling Expenses (if any) 85.00: When received, 12.4.1938

W. Churridge.  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned See PE machy rpt

FRI. 25 NOV 1938



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