

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13057

Date of writing Report 8th May 1950 When handed in at Local Office \_\_\_\_\_ 19\_\_\_\_ Port of Copenhagen  
Received at London Office 12 MAY 1950

No. in Survey held at Katindborg Date, First Survey 1st February 1949 Last Survey 21st Nov. 1949  
Reg. Book. 12178 on the Single Screw vessel. HENNING MERSK Number of Visits 3

Built at Odense By whom built Odense Skibsbyggeri A/S Yard No. 97 When built 1945  
Owners A/S Sundby & S. af 1912 A/S Port belonging to Fredericia

Oil Engines made at Katindborg By whom made Motofabriken Bueh ENG 6217- 6218 When made 1949  
Generators made at Belgrad By whom made Harland & Wolff, Ltd MAC 8878- 8879 When made 1949

No. of Sets 2 Engine Brake Horse Power 47 M.N. as per Rule  Total Capacity of Generators 60 Kilowatts.

Is Set intended for essential services \_\_\_\_\_

OIL ENGINES, &c.—Type of Engines Heavy oil, 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 60 kg/cm<sup>2</sup> Diameter of cylinders 135 mm Length of stroke 180 mm No. of cylinders 5 No. of cranks 5

Mean indicated pressure 6.5 kg/cm<sup>2</sup> Firing order in cylinders 1-2-4-5-3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 138 mm

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 40.5 x 10<sup>4</sup> Revolutions per minute 625

Flywheel dia. 675 mm Weight 180 kg Means of ignition compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as app. 95 mm Crank pin dia. 85 mm Crank Webs Mid. length breadth 37.5 mm Thickness parallel to axis   
as fitted Mid. length thickness 135 mm Thickness round eye-hole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

Are means provided to prevent racing of the engine when declutched Yes Means of lubrication forced Kind of damper if fitted

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

Cooling Water Pumps, No. 1 off 1.8 t/h Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 1 off rotary 4 t/h

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 \_\_\_\_\_ State No. of Report or Certificate \_\_\_\_\_

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

Can the internal surfaces of the receivers be examined \_\_\_\_\_ What means are provided for cleaning their inner surfaces \_\_\_\_\_

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

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. \_\_\_\_\_ Total cubic capacity \_\_\_\_\_ Internal diameter \_\_\_\_\_ thickness \_\_\_\_\_

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

ELECTRIC GENERATORS:—Type enclosed, ventilated

Pressure of supply 110 volts. Full Load Current 273 Amperes. Direct or Alternating Current Direct

If alternating current system, state the periodicity  Has the Automatic Governor been tested and found as per Rule when full 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 Yes Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes 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 Yes and do the results comply with the requirements Yes

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

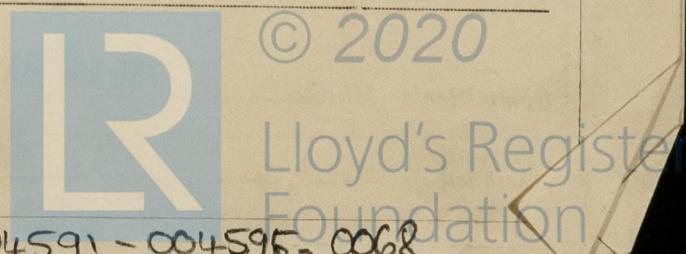
Details of driven machinery other than generator

PLANS.—Are approved plans forwarded herewith for Shafting Yes Receivers  Separate Tanks

Have Torsional Vibration characteristics if applicable been approved  Armature shaft Drawing No.

SPARE GEAR as per Rules

The foregoing is a correct description,  
**MOTOFABRIKEN BUKH**  
DIESELSKAB  
Judith Manufacturer.



004591 - 004595 - 0068

Dates of Survey while building: During progress of work in shops - - 1949: 1/2 - 25/4 - 2/11.  
 During erection on board vessel - - - 3 +  
 Total No. of visits - - -  
 Dates of Examination of principal parts - Cylinders and Covers and Pistons 1/2-49 Piston rods ✓  
 Connecting rods 1/2-49 Crank and Flywheel shafts 1/2-49 Intermediate shafts ✓  
 Crank shaft Material Mild Steel Tensile strength 79.9 kg/mm<sup>2</sup>  
 Elongation 25.4 % on 50mm Identification Marks LLOYD'S N: 837-835 12.49  
 EN9. N: 6217-6218  
 Flywheel shaft, Material ✓ Identification Marks ✓  
 Identification marks on Air Receivers ✓

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.)  
 The above oil engines have been constructed under Special Survey in accordance with the Rules and plans approved by the Surveyor General E dated 3rd November 1947 and originally intended for Ford No. 110 by Messrs. Odense Skibsbyggeri A/S, Odense.  
 The material used has been examined and tested as required by the Rules of this Society, the crankshafts as per Goldenbury Certf. N: 1026 of the 12th November 1948 and the connecting rods as per Copenhagen Certf. N: 7128.  
 The engines have been tested at Messrs works and found to work satisfactory.

5m. 1.48.-T. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)

The amount of Fee ... £ 150/-  
 Travelling Expenses (if any) £ -  
 When applied for 19 50  
 When received 19

Committee's Minute  
 Assigned  
 FRI. 19 MAY 1950  
 See vol 10900

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