

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 10355

OCT - 9 1937

Received at London Office

Date of writing Report 4 Oct. 1937 When handed in at Local Office 19 Port of Copenhagen.

No. in Survey held at Copenhagen and Nakskov Date, First Survey 12 June 1936 Last Survey 28 Sept. 1937.  
Reg. Book. Number of Visits 33.

on the Single Screw vessel ALEX VAN OPSTAL. Tons { Gross 5965.14  
Net 3436.93.

Built at Nakskov By whom built Nakskov Skibsvaerft Yard No. 80. When built 1937.

Owners Compagnie Maritime Belge (Societe Anonyme) Port belonging to Antwerpen.

Oil Engines made at Copenhagen By whom made As. Burmeister & Wain Engine Contract Nos. 2661-62-63. When made 1937.

Generators made at Copenhagen By whom made As. Titan. Contract Nos. 70097, 70098, 70099. When made 1937.

No. of Sets 3. Engine Brake Horse Power 3x250 Nom. Horse Power as per Rule Total Capacity of Generators 3x165 Kilowatts.

OIL ENGINES, &c. Type of Engines Diesel, trunk pistons, solid inject. 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 49 kg/cm<sup>2</sup> Diameter of cylinders 220 mm Length of stroke 370 mm No. of cylinders 4. No. of cranks 4.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 276 mm. Is there a bearing between each crank Yes.

Revolutions per minute 400. Flywheel dia. 1200 mm Weight 1550 kg Means of ignition compression Kind of fuel used diesel oil.

Crank Shaft, dia. of journals as per Rule 135 mm as fitted 150 mm Crank pin dia. 150 mm Crank Webs Mid. length breadth 290 mm Thickness parallel to axis 85 mm

Flywheel Shaft, diameter as per Rule 135 mm as fitted 150 mm Intermediate Shafts, diameter as per Rule 135 mm as fitted 150 mm Thickness of cylinder liners 18 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 lagged.

Cooling Water Pumps, No. 1 off for each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes.

Lubricating Oil Pumps, No. and size 1 off for each engine. - gear-wheel type, - 5.5 Tons per hour each.

Air Compressors, No. 2 off No. of stages 2 Diameters 1st Stage 280 mm 2nd Stage 250 mm Stroke 190 mm Driven by the engine.

Scavenging Air Pumps, No. 1 off for each engine Diameter 30 mm<sup>3</sup>/min. each Stroke Rotating Driven by the engine.

AIR RECEIVERS: - 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 covers at top and bottom.

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

High Pressure Air Receivers, No. None 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 off Total cubic capacity 2 x 100 litres Internal diameter 336 mm thickness 10 mm

Seamless, lap welded or riveted longitudinal joint lap welded Material S.M. Steel Range of tensile strength 43.1 kg/mm<sup>2</sup> Working pressure by Rules 36.5 kg/cm<sup>2</sup>

ELECTRIC GENERATORS: Type Grip proof, ventilated.

Pressure of supply 220 volts. Load 3x750 Amperes. Direct or Alternating Current direct.

If alternating current system, state frequency of periods per second ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes.

Generators, do they comply with the requirements regarding rating Yes are they compound wound Yes.

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator ✓

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.

PLANS. Are approved plans forwarded herewith for Shafting Yes. Receivers No Separate Tanks no.

SPARE GEAR As per lists. no 13-14-15-24-25-26-27-28-29.

The foregoing is a correct description,  
BURMEISTER & WAIN MASKIN- OG SKIBSBYGGERI

*A. Houmoller*

Manufacturer.



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Lloyd's Register Foundation

W467-0142

Dates of Survey while building  
 During progress of work in shops - 12/6-197-24/10-29/10-31/10-3/11-19/11-24/11-18/11-8/12-14/12-15/12/1936-11/1-20/1-5/2-24/2-1/3-5/3-8/3-10/3-27/4-11/5-  
 During erection on board vessel - 29/7-9/8-16/8-25/8-1/9-4/9-7/9-25/9-27/9-28/9/1937.  
 Total No. of visits 33.

Dates of Examination of principal parts—Cylinders with Covers 5/2-27/4/1937 Pistons 5/2-16/6/1937 Piston rods ✓

Connecting rods 12/6-10/7-31/10/1936. Crank and Flywheel shaft 24/10-3/11-8/12-14/12/1936-11/1/1937 Intermediate shaft ✓

Crank and Flywheel shafts, Material S.M. Engel Steel Identification Mark Lloyd's No 3480-3481-3482 C.V. 11.1.37.

Intermediate shafts, Material ✓ Identification Marks ✓

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 engines are of Messrs. Burmeister & Wain's Standard Type and they have been constructed under Special Survey and in accordance with the Society's Rules, the approved plan for crank shafts and the Secretary's letter E 14/7-1936. The material has been tested and examined, as per Rules, and found satisfactory. The workmanship is of good description throughout.

Im. 6.31—Transfer. (The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... .. £	:	:	When applied for,
			✓ 19.....
Travelling Expenses (if any) £	:	:	When received,
			19.....

*L. Langkila Jensen*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 12 OCT 1937  
 Assigned See other F.E. report



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