

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 10433.  
15 1938

Received at London Office

Date of writing Report 8<sup>th</sup> Jan. 1938 When handed in at Local Office 19 Port of Copenhagen.

No. in Survey held at Copenhagen, Odense & Nakskov Date, First Survey 5<sup>th</sup> September 1936 Last Survey 17<sup>th</sup> Dec. 1937.  
eg. Book. Number of Visits 4.

17636. on the Single Screw vessel "COPIAPO" Tons { Gross 7216.41.  
Triple Net 4433.65  
Quadruple

Built at Nakskov By whom built A/S. Nakskov Skibsvaerk Yard No. 82. When built 1937.

Owners Compania Lda Americano de Vapores Port belonging to Valparaiso.

Engines made at Copenhagen By whom made Burmeister & Wain Contract No. 27/2-13-14. When made 1937

Generators made at Odense By whom made Thomas B. Thrigge Contract No. 328597-98-99 When made 1937.

No. of Sets 3. Engine Brake Horse Power 3x 375 Nom. Horse Power as per Rule Total Capacity of Generators 720 Kilowatts.

TYPE OF ENGINES, &c. Type of Engines Diesel, trunk piston, solid injection 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 6 No. of cranks 6.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 294 mm. Is there a bearing between each crank yes.

Revolutions per minute 400 Flywheel dia. 980 mm Weight 1310 kg. Means of ignition Compression Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals as per Rule 138 mm as fitted 180 mm Crank pin dia. 180 mm Crank Webs Mid. length breadth 290 mm Thickness parallel to axis 102 mm

Intermediate Shafts, diameter as per Rule 138 mm as fitted 180 mm Thickness of cylinder liners 18 mm.

Is a governor or other arrangement fitted to prevent racing of the engine when detached 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. Independent pumps Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 1 off, 2.2 Tom/hour gearwheel type on each engine.

Air Compressors, No. 1 on each engine No. of stages 2. Diameters 1) 280 mm, 2) 250 mm Stroke 190 mm Driven by Gen. engine direct.

Scavenging Air Pumps, No. 1 off, rotary Diameter 42.1 mm Stroke on each engine Driven by chain from crankshaft.

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 fitted

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. One Total cubic capacity 250 litres Internal diameter 380 mm thickness 14 mm

Seamless, lap welded or riveted longitudinal joint lap welded Material S.M. Steel Range of tensile strength 28.43 tons Working pressure by Rules 40 kg/cm<sup>2</sup> 37.6  
actual = 28 kg.

ELECTRIC GENERATORS:—Type dry proof, ventilated.

Pressure of supply 220 volts. Load 1090 Amperes. Direct or Alternating Current direct.

Is an 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 ✓

Are there 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.

ANS. Are approved plans forwarded herewith for Shafting yes. Receivers ✓ Separate Tanks ✓  
(If not, state date of approval)

ARE GEAR as per Rules. ✓

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

A. Houmoller

Manufacturer.



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Lloyd's Register

Foundation

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3/9 - 19/9 - 24/11 - 3/12 - 10/12 - 21/12 - 29/12 - 30/12 1936. - 7/1 - 11/1 - 20/1 - 25/1 - 1/2 - 14/2 - 17/2 - 22/2 - 23/2

Dates of Survey while building  
 During progress of work in shops - - 24/2 - 8/3 - 9/3 - 12/3 - 18/3 - 8/4 - 24/4 - 7/5 - 13/5 - 14/5 - 20/5 - 25/5 - 2/6 - 7/6 - 17/8 1937.  
 During erection on board vessel - - - 12/10 - 5/11 - 9/11 - 23/11 - 30/11 - 8/12 - 13/12 - 17/12 1937.  
 Total No. of visits 41.

Dates of Examination of principal parts—Cylinders *wilds* Covers 17/2-8/3-2/6 1937 Pistons 2/6 1937. Piston rods ✓

Connecting rods 5/9 - 19/9 - 24/11 1936. Crank and Flywheel shaft 3/2-10/2-29/12 1936-2/1-24/2-8/3 1937 Intermediate shaft ✓

Crank and Flywheel shafts, Material *S. M. Steel* Identification Mark *See p 712 3546-47 C.V. 22.2.37.*

Intermediate shafts, Material ✓ Identification Marks ✓ *See p 712 3574 C.V. 8.3.37.*

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.)

The oil engines and generators have been constructed under special survey and in accordance with the Society's Rules, the approved plan of crank shafts and the requirements contained in the Secretary's letter E, dated the 28<sup>th</sup> Oct. 1936. The material has been tested and examined as required by the Rules and found satisfactory, - the workmanship is of good description throughout. On completion the oil engines with generators were tested under full power working condition and found satisfactory.

*W. H. H.*

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, 14. 1. 38  
 Travelling Expenses (if any) *Rs. 54.00.* : When received, 16/2 19. 38  
*Jan 16/3*

*W. H. H.*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 28 JAN 1938**  
 Assigned *See Gen J.C. 10433*

