

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 16976.

Received at London Office 10 OCT 1949

Date of writing Report 3rd October 1949. When handed in at Local Office 8th October 1949. Port of Gothenburg.

No. in Survey held at Gothenburg Date, First Survey 13th May Last Survey 22nd September 1949. Number of Visits 15

40015 on the ~~XXXX~~ ~~XXXX~~ ~~XXXX~~ Single Screw vessel "PERICLES" Tons Gross 9938 Net 5893

Built at Gothenburg By whom built A-B. Götaverken Yard No. 630 When built 1949

Owners D/S A/S Eikland Port belonging to Oslo

Oil Engines made at Gothenburg By whom made A-B. Götaverken Engine Nos. 2039-2040 When made 1949

Generators made at Copenhagen By whom made A/S Titan (A.S.E.A.) Generator Nos. 2216577, 2216578, 2216579 When made 1947

No. of Sets 2 Engine Brake Horse Power 2 x 165 M.N. as per Rule 82.5 Total Capacity of Generators 220 Kilowatts.

Is Set intended for essential services. Yes

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

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 240 mm. Length of stroke 360 mm. No. of cylinders 4 No. of cranks 4

Mean indicated pressure 6.8 kg/cm<sup>2</sup> Ring order in cylinders 1-3-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 301 mm.

Is there a bearing between each crank Yes Moment of inertia of flywheel 972 kgs. (Kg. cm. sec.<sup>2</sup>) 2374

Flywheel dia. 1250 mm. Weight 2245 kgs. Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals 160 mm. Crank pin dia. 160 mm. Crank Webs Mid. length breadth 210 mm. Thickness parallel to axis ---

Flywheel Shaft, diameter 160 mm. Intermediate Shafts, diameter --- General armature, moment of inertia 285 (Kg. cm. sec.<sup>2</sup>)

Are means provided to prevent racing of the engine Yes Means of lubrication Forced Kind of damper if fitted None

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 fresh water, and 1 salt water, each of 265 litres per minute capacity, also connected to the main cooling system Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size 1 x 3150 litres per hour

Air Compressors, No. None No. of stages --- Diameters --- Stroke --- Driven by ---

Scavenging Air Pumps, No. None Diameter --- Stroke --- Driven by ---

AIR RECEIVERS:—Have they been made under Survey. None 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. 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. None 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 Drip proof compound

Pressure of supply 220 volts. Full Load Current 3 x 500 Amperes. Direct or Alternating Current Direct current

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 --- and do the results comply with the requirements ---

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

Details of driven machinery other than generator Generators only

PLANS.—Are approved plans forwarded herewith for Shafting 21.8.45 & 7.3.1947 Receivers --- Separate Tanks ---

Have Torsional Vibration characteristics if applicable been approved 21.8.1945 & 7.3.1947 Armature shaft Drawing No. 102497 & 108299.

SPARE GEAR As per Rule supplied

The foregoing is a correct description, and the particulars of the installation as fitted are as approved for torsional vibration characteristics.

AKTIEBOLAGET GOTÄVERKEN Manufacturer.

Lloyd's Register

013042-013051-0232

Dates of Survey while building { During progress of work in shops - - } 13th May - 22nd September, 1949.  
 { During erection on board vessel - - }  
 Total No. of visits 15

Dates of Examination of principal parts—Cylinders 18 & 20/5.26/8 1949 Covers 18 & 20/5.26/8 49 Pistons 27/5 1949 Piston rods ---

Connecting rods 27/5 1949 Crank shafts 27/5 1949 Intermediate shafts ---

Crank shaft { Material S.M. Steel Tensile strength 50.4 - 52.0 kg/mm<sup>2</sup>  
 { Elongation 35.0 - 32.0 % Identification Marks LLOYD'S 5980/4818 LLOYD'S 1859/14  
 1093 IM 27.4.48 503 IM 16.12.48

Flywheel shaft, Material --- Identification Marks ---

Identification marks on Air Receivers -----

Is this machinery duplicate of a previous case No. --- If so, state name of vessel ---

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

These auxiliary engines have been built under special survey in accordance with the Rules and approved plans. The workmanship and materials are good and test sheets in respect of the crank shafts are attached.

The machinery has been securely fitted in the vessel under our inspection and to our satisfaction, tested under full working power conditions and found in order.

One steam auxiliary engine, manufactured by Messrs. E. Reader & Son, having No. 23610, rating 170 BHP at 450 revolutions per minute has also been installed. Please see report C-7661 attached.

**Note:**

Engine No. 2040 is fitted with a new type of crank shaft. Plan and torsional vibration characteristics of which were generally approved as per the Secretary's letter dated the 8th March, 1947, initialled "E".

5011-148-T. (MADE AND PRINTED IN IRELAND)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... Kr. :290:00 { When applied for 8th Oct. 1949.

Travelling Expenses (if any) £ --- : --- : --- { When received --- 19 ---

FRI. 18 NOV 1949

Committee's Minute

Assigned *Su F. E. mealy. spb.*

*Clayton*  
 Surveyor to Lloyd's Register of Shipping.



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