

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 12832

Feb 20 1940

Received at London Office

Date of writing Report 9<sup>th</sup> Feb 1940 When handed in at Local Office 16<sup>th</sup> Feb 1940 Port of Gothenburg

No. in Survey held at Gothenburg Date, First Survey 6<sup>th</sup> April 1939 Last Survey 8<sup>th</sup> Feb. 1940 Number of Visits 26

Reg. No. 38057 on the Single Triple Quadruple Screw vessel "ANDREA BRÖVIG"

Tons Gross 10173 Net 6083

Built at Gothenburg By whom built A.B. GÖTAVERKEN Yard No. 539 When built 1940

Owners T.H. BRÖVIG Port belonging to FARSUND

Oil Engines made at Gothenburg By whom made A.B. GÖTAVERKEN Contract No. 1367/8 When made 1940

Generators made at VÄSTERÅS By whom made ASEA Contract No. 116890 116891 116892 When made 1940

No. of Sets 2 Engine Brake Horse Power 2x190 Nom. Horse Power as per Rule 2x434 Total Capacity of Generators 280 Kilowatts.

## OIL ENGINES, &c.—Type of Engines Heavy Oil 2 or 4 stroke cycle 4 Single or double acting S.F.

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 240 mm Length of stroke 360 mm No. of cylinders 5 No. of cranks 5

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 301 mm Is there a bearing between each crank Yes

Revolutions per minute 450 Flywheel dia. 1250 mm Weight 1910 kg Means of ignition Compression Kind of fuel used Heavy Oil

Crank Shaft, dia. of journals as per Rule 141 mm as fitted 160 mm Crank pin dia. 160 mm Crank Webs Mid. length breadth 210 mm Thickness parallel to axis shrunk Mid. length thickness 80 mm Thickness around eyehole shrunk

Flywheel Shaft, diameter as per Rule Flywheel as fitted Flywheel Intermediate Shafts, diameter as per Rule shrunk as fitted shrunk Thickness of cylinder liners 25x14 mm

Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Fresh

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. One 19.2 ton/hour. Can also be cooled by sea pump 25 t/h. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size One on each engine, 4 ton/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 Yes State No. of Report or Certificate 6480

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 Steam & rods

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. One Total cubic capacity 120 litres Internal diameter 302 mm thickness 8 mm

Seamless, lap welded or riveted longitudinal joint seamless Material 5.5% steel Range of tensile strength 42 kg/cm<sup>2</sup> Working pressure by Rules 42.5 kg/cm<sup>2</sup>

## ELECTRIC GENERATORS:—Type Drip proof compound

Pressure of supply 220 volts. Full Load Current 636 Amperes. Direct or Alternating Current Direct

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 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 -

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

PLANS. Are approved plans forwarded herewith for Shafting 5.10.38 Receivers 24.4.39 Separate Tanks 16.10.39  
(If not, state date of approval)

SPARE GEAR as per Rules.

The foregoing is a correct description,

**ARTIEBOLAGET GÖTAVERKEN**

*W. Brövig*

Manufacturer.



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W1165-0195

Dates of Survey while building  
 During progress of work in shops - 1939: April 6, May 24, 24, 25, June 10, Aug 19, 21, Sept 13, 14, Nov 20, 1940: Jan 2, 3, 8, Feb 2, 3  
 During erection on board vessel - 1939: Dec 19, 20, 29, 1940: Jan 15, 16, 17, 29, Feb 2, 3, 5, 8  
 Total No. of visits 26

Dates of Examination of principal parts—Cylinders 24.5.39 Covers 24.5.39 Pistons 24.5.39 Piston rods ✓

Connecting rods 24.5.39 Crank and Flywheel shafts 17/8 39 Intermediate shafts ✓

Crank and Flywheel shafts, Material S. A. Steel Identification Marks WTM 10256/WTM 21.3.19.39

Intermediate shafts, Material ✓ Identification Marks ✓

Identification marks on Air Receiver

5468  
 LLOYD'S TEST  
 HT 80 FTM.  
 WP 40 FTM.  
 HV. 21.6.39  
 XJ 6766

Is this machinery duplicate of a previous case Yes If so, state name of vessel "Britannia", Saton Yard 17.5.39

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been built under special survey in accordance with the Rules & approved plans.

The workmanship & materials are good, and forging reports for the crankshafts are attached.

The engines have been securely fitted in the vessel under my supervision & to my satisfaction.

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

Steu L...  
 Surveyor to Lloyd's Register of Shipping.

FRI. 23 FEB 1940

Committee's Minute

Assigned

See fol. 7. E. 12832



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1 m. 5. 37. - Transferred.  
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)