

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 6134a

16 SEP 1950

Writing Report 5th Aug., 1950. When handed in at Local Office 7th Aug., 1950. Port of Halifax, N. S. Received at London Office

Survey held at Halifax, N. S. Date, First Survey 12th July, 1949 Last Survey 19th July, 1950  
 on the Twin Screw vessel "BAHIA THETIS" Number of Visits 10

at Halifax, N. S. By whom built Halifax Shipyards, Limited Yard No. 18 When built Comp. 1950  
 Argentine Government

Engines made at Beloit, Wisconsin By whom made Fairbanks Morse & Co. Contract No. 429-T When made 1949  
 Port belonging to Buenos Aires.

Generators made at Beloit, Wisconsin By whom made Fairbanks Morse & Co. Contract No. 429-T When made 1949

of Sets 2 Engine Brake Horse Power 280 Nom. Horse Power as per Rule - Total Capacity of Generators 384 Kilowatts.

(Particulars also entered from Clv. Rpt. 4c - No. 1365, Sheet 1, forwarded herewith).  
 ENGINES, &c.—Type of Engines Heavy Oil, Solid Injection 2 or 4 stroke cycle 2 Single or double acting Single.

Maximum pressure in cylinders 1150 p.s.i. Diameter of cylinders 6.25" Length of stroke 9" No. of cylinders 8 No. of cranks 9

Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge 8" Is there a bearing between each crank Yes

Revolutions per minute 720 Flywheel dia. 27" Weight 1000 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule - as fitted 5.497" Crank pin dia. 5.497" Crank Webs Mid. length breadth 8" Thickness parallel to axis -  
 as per Rule - as fitted None Intermediate Shafts, diameter as per Rule - as fitted None Thickness around eye-hole -

Wheel Shaft, diameter as per Rule - as fitted None Thickness of cylinder liners 0.375" min.

governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication Pressure

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Boiling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Lubricating Oil Pumps, No. and size One attached 63 g.p.m. (One hand pump)

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

Evacuating Air Pumps, No. One Oscillating vane type Diameter Vane 17" x 21" Stroke 7.5" Driven by Crankshaft

RECEIVERS:—Have they been made under Survey None (Hfx. Rpt. 4b-No. 6134) State No. of Report or Certificate -

Each receiver, which can be isolated, fitted with a safety valve as per Rule -

Are 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 -

Unless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules -

Working Air Receivers, No. - Total cubic capacity - Internal diameter - thickness -

Unless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules -

ELECTRIC GENERATORS:—Type 2 wire, compound wound, drip proof, ventilated, single bearing.

Pressure of supply 225 volts. Full Load Current 853 Amperes. Direct or Alternating Current D.C.

Is an alternating current system, state the periodicity - Has the Automatic Governor been tested and found as per rule when full load is suddenly  
 opened 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  
 labels 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  
 tested and tested under survey Yes

Are approved plans forwarded herewith for Crankshaft. No. NYk 26-2-45 Receivers None Separate Tanks None  
 (If not, state date of approval)

REDUCED GEAR To Rule Requirements (See Clv. Rpt. 4c- No. 1363 for list of spares).

The foregoing is a correct description,

Engine Serial Nos. 925141 & 925142  
 Generator " " X-72952 & X-72953

Manufacturer.

Lloyd's Register Foundation

014751-014762-0146

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 RPT  
 1365

(Particulars also entered from Clv. Rpt. 4c No. 1365, Sheet 1).

|                                |                                     |   |
|--------------------------------|-------------------------------------|---|
| Dates of Survey while building | During progress of work in shops -- | Feb. 25; Mar. 11, 25; April 12, 18, 20; May 9, 18, 24, 26; June 8, 15, July 8, 26, 14c. |
|                                |                                     | During erection on board vessel ---   |
|                                | Total No. of visits                 | 24 (14 plus 10)   |

Dates of Examination of principal parts—Cylinders 9-5-49 Covers 9-5-49 Pistons 9-5-49 Piston rods  
 Connecting rods 9-5-49 Crank and Flywheel shafts 9-5-49 Intermediate shafts  
 Crank ~~shafts~~ shafts, Material Cast alloy Iron Identification Marks LLOYDS 6814, 6815.  
 Armature Identification Marks LLOYDS 6814A, 6815A.  
~~shafts~~ shafts, Material O.H. Forged Steel Identification Marks LLOYDS 6814A, 6815A.  
 Identification marks on Air Receivers -

Is this machinery duplicate of a previous case Yes If so, state name of vessel M.V. "BAHIA AGUIRRE" (Hfx.Rpt. of Se)  
 M.V. "BAHIA BUEN SUCESO" ( " " )

General Remarks (State quality of workmanship, opinions as to class, &c. These Oil Engine Electric Generator Sets have been built under the supervision of the Society's Surveyors, installed in the ship in accordance with the Requirements of the Rules, the Secretary's Letters, and the Approved Plans, tested under full working conditions and found in order (See also Cleveland Rpt. 4c - No. 1365, Sheet 1, forwarded herewith).

The torsional vibration characteristics of the shafting installation of these generator sets have been appraised as advised by Montreal letter to this Office, dated 3rd April, 1950.

The workmanship and materials are good, and it is recommended for the favourable consideration of the Committee that the above Oil Engine Electric Generator Sets, in conjunction with the Main Machinery, are eligible, in my opinion, to be classed \* LMC 8,50.

IM-3-42 - Transfer. (Printed in U. S. A.)  
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

|   |                         |
|---|-------------------------|
| The amount of Fee (Collected at Cleveland)<br>(See Clv. Rpt. 4c - No. 1365 Sheet 1) | When applied for,<br>19 |
| Travelling Expenses (if any) £<br>(Included in Hfx.Rpt. 4b-No. 6134)                | When received,<br>19    |

*Geo. Peabody*  
 Surveyor to Lloyd's Register of Shipping.

FRI, 29 SEP 1950

Committee's Minute  
 Assigned See hints on S.C.Rpt.