

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 1177

Received at London Office **23 MAY 1956**

by Rules of writing Report 17.3.55.19 When handed in at Local Office 19 Port of **NOTTINGHAM**  
 Actual in Survey held at **Lincoln** Date, First Survey 25.10.54. Last Survey 14.2.55.19

Book. **519** on the **Single** Screw vessel **M.V. BONAVISTA** Number of Visits **4**  
 Actual. **Triple** **Quadruple** Tons Gross **1174** Net **575**

to the order of: **M/S. Hall, Russell & Co. Ltd.,** Aberdeen. Yard No. **852E** When built  
**CANADIAN NATIONAL RAILWAY Co.** Port belonging to **ST. JOHN'S N.F.L.**  
 Engines made at **Lincoln** By whom made **Ruston & Hornsby Ltd.,** Contract No. **388783-4.** When made  
 Motors made at **Liverpool** By whom made **Campbell & Isherwood Ltd.,** Contract No. **Engines** When made  
 of Sets **2** Engine Brake Horse Power **170** M.N. as per Rule **34** Generators Nos. **50526-7.** Total Capacity of Generators **200** Kilowatts.  
 Intended for essential services.....

**ENGINES, &c.**—Type of Engines **5VCBZ.** 2 or 4 stroke cycle **4** Single or double acting **SA**  
 Minimum pressure in cylinders **730 ± 3%** Diameter of cylinders **8"** Length of stroke **10 3/4"** No. of cylinders **5** No. of cranks **5**  
 Indicated pressure **104.** Firing order in cylinders **1.3.5.4.2.** Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **9.3/16**  
 Is there a bearing between each crank **Yes.** Moment of inertia of flywheel **5.3 tons.** ft. **2** Revolutions per minute **600**  
 Crank wheel dia. **3'9"** Weight **12.3 cwts.** Means of ignition **Compression.** Kind of fuel used **Diesel Oil.**  
 Crank Shaft, dia. of journals as per Rule..... Crank pin dia. **4 3/4"** Crank Webs Mid. length breadth **8"** Thickness parallel to axis.....  
 as fitted..... **6"** Mid. length thickness **2 1/2"** Thickness round eye-hole.....

Wheel Shaft, diameter as per Rule..... Intermediate Shafts, diameter as per Rule..... General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>).....  
 Means provided to prevent racing of the engine when declutched **Yes.** Means of lubrication **Forced.** Kind of damper if fitted.....  
 Are the cylinders fitted with safety valves **Yes.** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material.....  
 Driving Water Pumps, No. **One engine driven.** Is the sea suction provided with an efficient strainer which can be cleared within the vessel.....  
 Lubricating Oil Pumps, No. and size **One 480 gals per hour.** Engine driven.....

**COMPRESSORS, No.**..... No. of stages..... Diameters..... Stroke..... Driven by.....  
**VENTILATING AIR PUMPS, No.**..... Diameter..... Stroke..... Driven by.....  
**AIR RECEIVERS:—**Have they been made under Survey..... 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.** **1** Cubic capacity of each **112 cf** Internal diameter **24"** thickness **1/16"**  
 Seamless, 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.....  
 Seamless, lap welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure by Rules.....

**ELECTRIC GENERATORS**—Type **Open canopy DP. CW. CR. Machines Nos. 50526/7.**  
 Voltage of supply **220 volts.** Full Load Current **455 Amperes.** Direct or Alternating Current **DC.**  
 Is the automatic Governor 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.....  
 Are the generators shielded that they cannot be accidentally earthed, short circuited, or touched..... Are the lubricating arrangements of the generators as per Rule.....  
 Do 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 **Yes.**  
 Do the generators are 100 kw. or over have they been built and tested under survey.....  
 Are the shafts of driven machinery other than generator.....

**APPROVED PLANS.**—Are approved plans forwarded herewith for Shafting **20.12.38.** Receivers..... Separate Tanks.....  
 (If not, state date of approval) **26.8.54.** Armature shaft Drawing No.....  
 Have Torsional Vibration characteristics if applicable been approved (state date of approval).....

**ARE GEAR**..... Supplied to Rule Requirements.....

The foregoing is a correct description,  
**Ruston & Hornsby, Limited** Manufacturer.  
 Y. Murchall



009888-009895-0047

Dates of Survey while building { During progress of work in shops - - } 26.1.55. 25.10.54. 9.2.55. 14.2.55.  
 { During erection on board vessel - - }  
 Total No. of visits 4.

Dates of Examination of principal parts—Cylinders 25.10.54. 26.1.55. Covers AS cyls. Pistons - Piston rods -

Connecting rods AS cyls. Crank and Flywheel shafts AS cyls. Intermediate shafts -

Crank shaft { Material Steel. 30% 32% Tensile strength 34 328  
 { Elongation Identification Marks LL. 10134. RG. 4567.  
 LL. 10133. RG. 4566.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers N 5486 21/13

Is this machinery duplicate of a previous case. If so, state name of vessel.

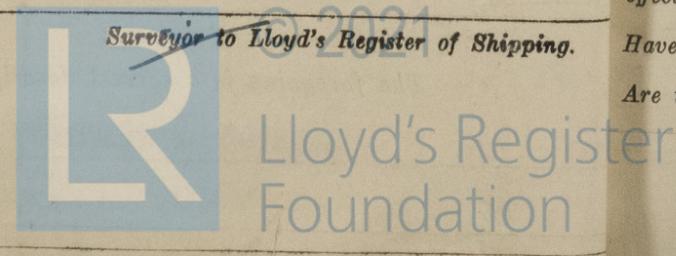
**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

These engines have been built under Special Survey in accordance with the Approved Plans and the Regulations of the Society, materials and workmanship being good.  
 The Generating Sets have been tested in the Shops under working conditions and the governors tested with satisfactory results.  
 The sets have been forwarded for installation in the vessel.  
 Explosion relief device fitted on each crankcase door. ✓

*These engines have been installed in M.V. "BONAVISTA" examined under full working conditions, governing checked and all parts found to operate satisfactorily*  
 T. Shonis

The amount of Fee ... £ 14 : 10 : 0 { When applied for 17.3.55. 19 C. 20760. A/C. No.  
 Travelling Expenses (if any) £ : : { When received 19

Committee's Minute GLASGOW 22 MAY 1956  
 Assigned SEE ACCOMPANYING MACHINERY REPORT



D.M.L.S.—T. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee Minute.)  
 25.5.55  
 955  
 255