

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Date of writing Report 30.11. 19 45. When handed in at Local Office 10.12. 19 45. Port of MANCHESTER.

No. in Survey held at Hazel Grove, Nr. Stockport. Date, First Survey 16th May, 1945 Last Survey 29th Nov. 1945. Number of Visits Seventeen.

on the City of Carlisle. Screw vessel. Tons Gross Net.

Built at Birkenhead. By whom built Messrs. Cammell Laird & Co. Yard No. 1156. When built 1946. Owners Ellerman Lines Ltd. Port belonging to London.

Oil Engines made at Hazel Grove. By whom made Mirrlees, Bickerton & Day Ltd. No. 9905, 6, 7. When made 1945. Generators made at Sunderland. By whom made Sunderland Forge & Eng. Co. Ltd. Contract No. When made 1945.

No. of Sets 3. Engine Brake Horse Power 885. Nom. Horse Power as per Rule 253. Total Capacity of Generators 525 Kilowatts.

OIL ENGINES, &c.—Type of Engines Direct Injection - Heavy Oil. 2 or 4 stroke cycle 4. Single or double acting Single.

Maximum pressure in cylinders 800 lbs/sq. in. Diameter of cylinders 8.5". Length of stroke 13.75". No. of cylinders 6. No. of cranks 6.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8.625". Is there a bearing between each crank Yes.

Revolutions per minute 600. Flywheel dia. 219.5". Weight 990 lbs. Means of ignition Compression. Kind of fuel used Heavy Oil.

Crank Shaft, dia. of journals as per Rule Approved. 5.75". Crank pin dia. 5.5625". Crank Webs Mid. length breadth 8.5". Thickness parallel to axis.

Flywheel Shaft, diameter as per Rule on crankshaft coupling. Intermediate Shafts, diameter as fitted. Thickness of cylinder liners 0.625".

Is a governor or other arrangement fitted to prevent racing of the engine when declutched 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 Water cooled.

Cooling Water Pumps, No. One-Centrifugal. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size One-gear Type - 800 Gallons 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 Yes. State No. of Report or Certificate G. 2863, G. 2864.

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 Manhole.

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. Two. Total cubic capacity 22.4. Internal diameter 2'0 3/4". thickness 1/16".

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

ELECTRIC GENERATORS:—Type Open Type - Compound Wound. Pressure of supply 220 volts. Full Load Current 795 Amperes. Direct or Alternating Current Direct.

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. Stamped Lloyd's Test G. 2847A, G. 2847B, G. 2847C. CA. 25.7.45. SDB. 1.8.45 SDB 1.8.45.

PLANS.—Are approved plans forwarded herewith for Shafting 1.1.43. Receivers. Separate Tanks.

SPARE GEAR As per Rule Requirements.

The foregoing is a correct description,

MIRRELES, BICKERTON & DAY, LTD. Manufacturer.

Samuel Martin (Chief Draftsman)



Dates of Survey while building { During progress of work in shops - - 1945 May 16, 23, July 23, 17, 26, Aug. 1, 8, 10, 28, Sept. 25, Oct. 1, 9, 17, Nov. 6, 13, 28, 29.
 During erection on board vessel - - -
 Total No. of visits.....

Dates of Examination of principal parts—Cylinders 23.5.45 to 29.11.45. Covers 1.8.45 to 29.11.45. Pistons 6.11.45. 28.11.45. 29.11.45. Piston rods -

Connecting rods 16.5.45 to 25.9.45. Crank and Flywheel shafts 1.10.45 6.11.45 13.11.45. Intermediate shafts -

Crank shaft { Material S.M. Steel. Tensile strength sq. inch 47.2 : 40.2 : 50.4
 Elongation 22% 28% 21% Identification Marks Lloyd's 869 : 953 : 789 J.N.B. 16.4.45 10.8.45 11.12

Flywheel shaft, Material - Identification Marks -

Is this machinery duplicate of a previous case Yes. Identification Marks -

Identification marks on Air Receivers Lloyd's E.4279: E.4280: JNB. 6.10.45.

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Messrs. Cammell Laird & Co. Yd. No. 1133 (Mch. Rpt. No. 11923)

GENERAL REMARKS (State quality of workmanship, opinions as to class, etc.) THESE ENGINES HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD.

THE ENGINES WERE FOUND SATISFACTORY WHEN TESTED IN THE SHOP UNDER FULL WORKING CONDITIONS AND COUPLED TO THEIR ELECTRIC GENERATORS. THE REQUIREMENTS OF NOTICE NO. 1803 HAVE NOT BEEN CARRIED OUT SINCE THIS ORDER WAS PLACED PRIOR TO THESE REQUIREMENTS BECOMING EFFECTIVE.

IN MY OPINION, THESE ENGINES ARE SUITABLE FOR THEIR INTENDED PURPOSE ON BOARD A VESSEL CLASSED WITH THIS SOCIETY.

COPIES OF AIR RECEIVER CERTIFICATE NOS. C.2863, C.2864, FORGING REPORTS FOR CRANKSHAFTS AND REPORTS FOR ELECTRIC GENERATORS ENCLOSED HEREWITH.

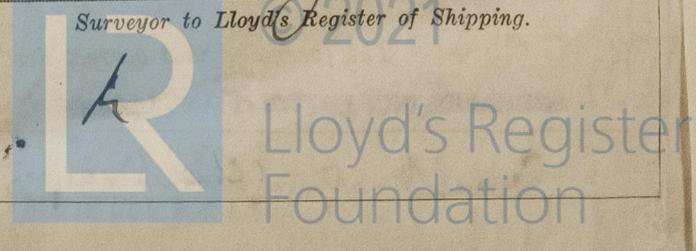
The above reported engines have been properly installed in the S.S. "City of Carlisle," tried under working conditions & found satisfactory.



The amount of Fee ... £ 25 : 6 : 0. When applied for 11. 12. 1945
 Travelling Expenses (if any) £ 3 : 0 : 0. When received 19

Dell Saylor
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 26 FEB 1946
 Assigned See Minute on Liverpool S.S. Machinery Reports.



10, 11, 12. T. (MADE AND PRINTED IN ENGLAND).
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)