

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 10,525

Date of writing Report 17<sup>th</sup> MAY 1941 When handed in at Local Office 27<sup>th</sup> MAY 1941 Port of MANCHESTER  
 No. in Survey held at KEIGHLEY Date, First Survey 31.1.41 Last Survey 12<sup>th</sup> MAY 1941  
 Reg. Book. KEIGHLEY Number of Visits 4

on the Single Screw vessel "EMPIRE RIVER" Tons Gross 319.74  
Triple  
Quadruple Net 149.78  
 Built at GAINSBOROUGH By whom built L.S. NATSON (GAINSBOROUGH) LTD Yard No. 1521 When built 1941  
 Owners Ministry of War Transport (Hqs) British Channel Islands Shipping Co, Ltd Port belonging to London  
 Oil Engines made at KEIGHLEY By whom made H. WIDDOP & CO LD. ENGINE Contract No. 4103 When made 1941  
 Generators made at - By whom made - Contract No. - When made -  
 No. of Sets ONE Engine Brake Horse Power 6 Nom. Horse Power as per Rule 1.7 Total Capacity of Generators - Kilowatts.

**OIL ENGINES, &c.**—Type of Engines VERTICAL SOLID INJECTION 2 or 4 stroke cycle 4 Single or double acting SINGLE  
 Maximum pressure in cylinders 700 LBS. Diameter of cylinders 4" Length of stroke 4" No. of cylinders ONE No. of cranks ONE  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5.125" Is there a bearing between each crank -  
 Revolutions per minute 1200 Flywheel dia. 22.5" Weight 1.4 CENTS Means of ignition COMPRESSION Kind of fuel used HEAVY OIL  
 Crank Shaft, dia. of journals as per Rule APPROVED Crank pin dia. 2.25" Crank Webs Mid. length breadth 3" Thickness parallel to axis SOLID  
as fitted 2.25" Mid. length thickness 1.25" shrunk Thickness around eye-hole -  
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 5/16"  
as fitted as fitted  
 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 NO Are the exhaust pipes and silencers water cooled or lagged with non-conducting material -  
 Cooling Water Pumps, No. ONE Is the sea suction provided with an efficient strainer which can be cleared within the vessel -  
 Lubricating Oil Pumps, No. and size ONE 5/8" DIA x 1/4" STROKE  
 Air Compressors, No. ONE No. of stages ONE Diameters 4.5" Stroke 2 3/4" Driven by Aux. ENGINE  
 Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

**AIR RECEIVERS:**—Have they been made under Survey - 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.** - 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.** - 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 -  
 Pressure of supply - volts. Full Load Current - Amperes. Direct or Alternating Current -  
 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 -  
 Generators, are they compounded as per rule - is an adjustable regulating resistance fitted in series with each shunt field -  
 Are all terminals accessible, clearly marked, and furnished with sockets -  
 Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched - Are the lubricating arrangements of the generators as per Rule -  
 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 -

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

SPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description.  
**T&P H. WIDDOP & COMPANY LTD.**

*J. Macneil*  
 Manufacturer.



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Dates of Survey while building { During progress of work in shops - - } 1941. JAN 31. FEB 17. APRIL 30. MAY 12.  
 { During erection on board vessel - - - }  
 Total No. of visits 4.

Dates of Examination of principal parts—Cylinders 31.1.41 Covers 31.1.41 Pistons 31.1.41 Piston rods -  
 Connecting rods 31.1.41 Crank and Flywheel shafts 31.1.41 Intermediate shafts -  
 Crank and Flywheel shafts, Material OH. INgot STEEL Identification Marks LLOYDS. 15 WTM. 1-3.40  
 Intermediate shafts, Material - Identification Marks -  
 Identification marks on Air Receivers -

Is this machinery duplicate of a previous case  YES If so, state name of vessel WATSONS YARD No 1520

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

THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE OF A GOOD QUALITY AND THE SET WHEN TESTED IN SHOP UNDER FULL LOAD CONDITIONS SHewed SATISFACTORY RESULTS. IN MY OPINION THIS ENGINE IS SUITABLE TO BE PLACED ON BOARD A VESSEL, CLASSED WITH THIS SOCIETY, FOR THE PURPOSE INTENDED.

This auxiliary set has now been properly fitted on board the vessel & tried under working conditions with satisfactory results.

*W. M. ...*

Im. 11. 37.—Transfer. (MADE IN ENGLAND.)  
 (The Surveys are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... .. £	:	:	When applied for, <i>M</i>
			19
Travelling Expenses (if any) £	:	:	When received,
			19

*W. M. ...*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned *See Gms. of machy rpt. 21432*  
 TUE. 13 JAN 1942

