

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 10,526

MAY 1941

Date of writing Report 17 MAY 1941 When handed in at Local Office 27 MAY 1941 Port of MANCHESTER  
 No. in Survey held at KEIGHLEY Date, First Survey 31 JAN. 1941 Last Survey 12 MAY 1941  
 Reg. Book. Single on the Twin Screw vessel "EMPIRE RIVER" Number of Visits 2  
 Tons Gross 319.74  
Net 149.78  
 Built at GAINSBOROUGH By whom built J.S. NATION (GAINSBOROUGH) LTD Yard No. 1521 When built 1941  
 Owners Ministry of War Transport (Wm.) British Channel Islands Shipping Co., Ltd Port belonging to London  
 Oil Engines made at KEIGHLEY By whom made H. KIDDOOP & CO LTD ENGINES 4104 Contract No. 4105 When made 1941  
 Generators made at BELFAST By whom made H. J. SCOTT & CO. GENERATORS 30609 Contract No. 38252 When made 1941  
 No. of Sets TWO Engine Brake Horse Power 14 Nom. Horse Power as per Rule 4 Total Capacity of Generators 8 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 400 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 1400 Flywheel dia. 18" Weight 1.1 CWT 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 eyehole  
 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. — No. of stages — Diameters — Stroke — Driven by —  
 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 110 volts. Full Load Current 36 Amperes. Direct or Alternating Current DIRECTIf 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 YESGenerators, are they compounded as per rule YES is an adjustable regulating resistance fitted in series with eachshunt 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 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

PLANS. Are approved plans forwarded herewith for Shafting YES (If not, state date of approval)Receivers —Separate Tanks —SPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description.

J. M. WIDDOOP &amp; COMPANY LTD

J. M. WIDDOOP

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - 1941. JAN. 31. MAY 12  
During erection on board vessel - - -  
Total No. of visits 2

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 O.H. INgot STEEL Identification Marks LLOYDS 14. WTM. 1.3.40 (2 OFF)  
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.)

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

These generating sets have now been properly fitted on board the vessel & tried under working conditions with satisfactory results.

*W. A. Christie*

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

*W. A. Christie*  
Surveyor to Lloyd's Register of Shipping.

TUE. 13 JAN 1942

Committee's Minute

Assigned

*See Gms. f.e. machs. mt. 21432*



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