

pt. 4c. **REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.** No. 15

Date of writing Report **25-3-42** 19 When handed in at Local Office **9-4-42** Port of **LEEDS** Received at London Office **11 APR 1942**

No. in Survey held at **Keighley** Date, First Survey **23-6-41** Last Survey **17-3-42** 19
 Reg. Book. **M/V "EMPIRE LILY"** Number of Visits **2**

on the **Single** Screw vessel **Tons** Gross Net
 - **Triple**
 - **Quadruple**

Built at **Northwich** By whom built **I. Pimblott Sons & Co. Ltd.** Yard No. **642** When built **1942**

Owners **Port belonging to**
 Oil Engines made at **Keighley** By whom made **H. Widdop & Co. Ltd.** Engines **Contract No. 4143/44** When made **1942**

Generators made at **Belfast** By whom made **Hugh J. Scott & Co. Ltd.** Generators **Contract No. 39612/11** When made **1941**

No. of Sets **2** Engine Brake Horse Power **14 (Total)** Nom. Horse Power as per Rule **-** Total Capacity of Generators **8** Kilowatts.

OIL ENGINES, &c.—Type of Engines **Airless injection heavy oil** 2 or 4 stroke cycle **4** Single or double acting **single**
 Maximum pressure in cylinders **700 lbs/sq.in.** Diameter of cylinders **4"** Length of stroke **4"** No. of cylinders **1** No. of cranks **1**

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **5,125"** Is there a bearing **either side of** crank **Yes**
 Revolutions per minute **1400** Flywheel dia. **19"** Weight **1,5 cwts** Means of ignition **compression** Kind of fuel used **Heavy oil**

Crank Shaft, dia. of journals as per Rule **2,21"** Mid. length breadth **3"** Thickness parallel to axis **-**
 as fitted **2,25"** Crank pin dia. **2,25"** Crank Webs **shrunk** Thickness around eye-hole **-**
 Mid. length thickness **1,25"**

Flywheel Shaft, diameter as per Rule **Approved and** as per Rule **-** Thickness of cylinder liners **,3125"**
 as fitted **2,125"** Intermediate Shafts, diameter as fitted **-**

Is a governor or other arrangement fitted to prevent racing of the engine when dectached **Yes** Means of lubrication **forced**
Engine started by hand
 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 per engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel **-**
Lubricating Oil Pumps, No. and size One per engine 0,625" bore x 0,25" stroke

Air Compressors, No. - No. of stages **-** Diameters **-** Stroke **-** Driven by **-**
Scavenging Air Pumps, No. - Diameter **-** Stroke **-** Driven by **-**

IR 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 **Compound wound, drip proof**
 Pressure of supply **110** volts. Full Load Current **72 (total)** 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 **Yes (attached)** *But no rule of temp. given* the results comply with the requirements **Yes**
 If the generators are 100 kw. or over have they been built and tested under survey **-**

LAN'S. Are approved plans forwarded herewith for Shafting **22-4-40** Receivers **-** Separate Tanks **-**
 (If not, state date of approval)

SHAFTING GEAR **In accordance with the requirements of the Rules.**

The foregoing is a correct description,
 For **H. WIDDOP & COMPANY LTD.**

J. Machead

Manufacturer.



J.F.
14/8/42

Dates of Survey while building { During progress of work in shops - - 23-6-41, 17-3-42
 { During erection on board vessel - - -
 Total No. of visits

Dates of Examination of principal parts—Cylinders 23-6-41 Covers 23-6-41 Pistons 23-6-41 Piston rods -
 Connecting rods 9-9-40 Crank and Flywheel shafts 1-3-40 Intermediate shafts -

Crank and Flywheel shafts, Material S.M. Steel Identification Marks Lloyd's No. 15 W.T.M. 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 "EMPIRE RIVER" (Watsons, Gainsborou

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been constructed under Special Survey, of tested materials, in accordance with the Secretary's letters, approved plans and the requirements of the Rules. The materials and workmanship are good and the engines were found to be satisfactory when tested in the shop under full load conditions with their respective generators. These engines are suitable in my opinion for fitting on board a vessel building to Class with the Society.

Lloyd's Register of Shipping

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

W. J. Ferguson
 Surveyor to Lloyd's Register of Shipping.

LIVERPOOL 4 JUL 1942

Committee's Minute Assigned See Minute on Liverpool I.E. Machinery Report.



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