

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office

24 JUN 1944

Date of writing Report 5. 6. 1944 When handed in at Local Office 12. 6. 1944 Port of

MANCHESTER.

No. in Survey held at PATRICROFT, MANCHESTER. Reg. Book.

Date, First Survey 11.2.44

Last Survey 1. 6. 1944.

Number of Visits 2.12

Single
on the Twin
Triple
Quadruple

400 TON TANKER. "EMPIRE BARKIS"

Tons { Gross
Net

Built at ROWHEDGE.

By whom built Rowhedge Ironworks.

Job

MS. 760.

When built 1944

Owners ~~ADMIRALTY~~ MINISTRY OF WAR TRANSPORT Port belonging to

LONDON

Oil Engines made at PATRICROFT.

By whom made L. Gardner & Sons Ltd.

Engine

No. 61205

When made 1944.

Generator made at MANCHESTER.

By whom made Lancashire Dynamo & Crypto

Generator

No. 198412

When made 1944.

No. of Sets 1 Engine Brake Horse Power 30 Nom. Horse Power as per Rule 8.5 Total Capacity of Generators 10 Kilowatts.

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

Maximum pressure in cylinders 850 lbs/sq" Diameter of cylinders 4 1/4" Length of stroke 6" No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5 3/4" Is there a bearing between each crank Yes.

Revolutions per minute 1000 Flywheel dia. 26" Weight 511 lbs. Means of ignition Compression Kind of fuel used Heavy Oil.

Crank Shaft, dia. of journals as per Rule 2 5/8" Approved and as fitted 2 5/8" Crank pin dia. 2 5/8" Crank Webs Mid. length breadth 4" Mid. length thickness 1 3/8" Thickness parallel to axis - Thickness around eyehole -

Flywheel Shaft, diameter as per Rule Flywheel mounted on Crankshaft Intermediate Shafts, diameter as fitted - Thickness of cylinder liners .096"

Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced.

Engine started by hand

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 12 Pints per Minute.

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 GENERATOR Type Compound Wound. Drip proof.

Pressure of supply 110 volts. Full Load Current 91 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. and do the results comply with the requirements Yes.

If the generators are 100 kw. or over have they been built and tested under survey -

PLANS. Are approved plans forwarded herewith for Shafting 15.10.43. Receivers Separate Tanks

SPARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description,

For and on behalf of L. Gardner & Sons Ltd Manufacturer.

R E Jones



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Lloyd's Register

Foundation

008973-008981-0237

Dates of Survey while building { During progress of work in shops - 11.2.44. 1.6.44.
During erection on board vessel - 1944 Feb 23 June 6.17.23.25 July 6.20 Aug 10.16.24.25.29
Total No. of visits 14

Dates of Examination of principal parts - Cylinders 11.2.44. Covers 11.2.44. Pistons 11.2.44. Piston rods -
Connecting rods 11.2.44. Crank and Flywheel shafts 2.10.42. Intermediate shafts -
Crank and Flywheel shafts, Material 2.10.42. Identification Marks LLOYD'S C.751. J.W.L. 2.10.42.
Intermediate shafts, Material - Identification Marks -
Identification marks on Air Receivers -

Is this machinery duplicate of a previous case No. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY, OF TESTED MATERIALS, IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND REQUIREMENTS OF THE RULES.

MATERIALS AND WORKMANSHIP ARE GOOD AND THE ENGINE WAS FOUND TO BE SATISFACTORY WHEN TESTED IN SHOP UNDER FULL LOAD CONDITIONS. THE ENGINE IS SUITABLE, IN OUR OPINION, FOR FITTING ON BOARD A VESSEL BUILDING TO THE CLASS OF THIS SOCIETY.

IN ADDITION TO THE 10 K.W. GENERATOR, THIS ENGINE DRIVES A CENTRIFUGAL BILGE PUMP MADE BY MESSRS. HAMWORTHY ENGINEERING CO., AND A CARGO PUMP THROUGH A WIGGLESWORTH CLUTCH. THESE PUMPS HAVE NOT BEEN TESTED AT THE ENGINE MAKERS' WORKS.

This engine has been efficiently fitted on board the vessel under Special Survey + in accordance with the approved plans + Rule requirements, tested under full load conditions + found satisfactory.

The exhaust pipes are lagged with non-conducting material.

The sea suction is provided with an efficient strainer which can be cleared within the vessel

J.E. Turpie.

The amount of Fee ... £ 4 : 4 : 0 When applied for, 12.6.1944.
Travelling Expenses (if any) £ 0 : 10 : 0 When received, 19.....

Committee's Minute

FRI. 6 OCT 1944

Assigned

see minute
in J.E. Rpl.

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



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