

REIVED

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pt. 4c.
D.O.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 387.

Received at London Office
LEEDS.

4-JUL-1949

Date of writing Report 27-6-1948 When handed in at Local Office 1-7-1949 Port of 23-11-48 Last Survey 16-6-1949

No. in Survey held at Reg. Book. Number of Visits 4

on the Motor Transfer BONNYBRIDGE Tons { Gross
Single Triple Quadruple
Screw vessel
Built at Thorne By whom built Richard Dunston & Co. Yard No. 630 When built 1949

Owners St. Andrews Steamship Co. Port belonging to Hull Engine Nos. 21229-30 Contract No. 30742-3 When made 1949

Oil Engines made at Leeds By whom made J. & H. McLaren Ltd. Contract No. When made
Generators made at By whom made Contract No. When made

No. of Sets 2 Engine Brake Horse Power 88 M.N. as per Rule 22 Total Capacity of Generators Kilowatts.

Set intended for essential services.

OIL ENGINES, &c.—Type of Engines M.R.2 Mark II 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 150 lbs/sq.in. Diameter of cylinders 142 mm. Length of stroke 200 mm. No. of cylinders 2 No. of cranks 2

Mean indicated pressure 90 lbs/sq.in. Firing order in cylinders. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 178 mm.

Is there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) Revolutions per minute 1000

Flywheel dia 2' - 9" Weight 425 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule approved 85 mm. Crank pin dia 85 mm. Crank Webs Mid. length breadth 130 mm. Thickness parallel to axis
as fitted 85 mm. Mid. length thickness 43 mm. shrunk Thickness round eye-hole

Flywheel Shaft, diameter Fitted on end of crankshaft. Intermediate Shafts, diameter as per Rule as fitted General armature, moment of inertia (16 m² or Kg.-cm.²)

Are means provided to prevent racing of the engine when declutched Yes Means of lubrication Forced Kind of damper if fitted

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged

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

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 Generators not supplied to Engine Builders.

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 as per Rule when full 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 they so spaced

Are all terminals accessible, clearly marked, and furnished with sockets Are the lubricating arrangements of the generators as per Rule

or shielded that they cannot be accidentally earthed, short circuited, or touched and do the results comply with the requirements

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

Details of driven machinery other than generator

PLANS.—Are approved plans forwarded herewith for Shafting 4-11-47 Receivers Separate Tanks 21-8-48

Have Torsional Vibration characteristics if applicable been approved (state date of approval) Armature shaft Drawing No.

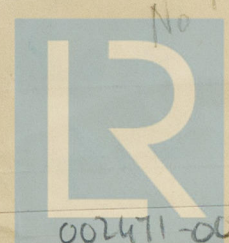
SPARE GEAR As per Rule Requirements.

The foregoing is a correct description,

Norm. A. Deighton.

Manufacturer.

FOR J. & H. MCLAREN, LTD.



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Lloyd's Register

002471-002476

Dates of Survey while building { During progress of work in shops - - 23-11-48, 24-11-48, 1-12-48, 16-6-48. During erection on board vessel - - 4 Total No. of visits Engine No. 21229- 23-11-48 1-12-48 16-6-48 21230 23-11-48 1 & 3-12-48 16-6-48 Dates of Examination of principal parts - Cylinders Covers Pistons Piston rods Connecting rods Crank and Flywheel shafts Intermediate shafts Crank shaft { Material O.H. Steel Tensile strength 58.5 Tons/sq.in. Engine 21229 27828 LDS. B.H. 17-2-48 Elongation - Identification Marks 21230 27828 LDS.-BH. 17-2-48. Flywheel shaft, Material - Identification Marks -

Identification marks on Air Receivers.

These engines have been constructed under special Survey of tested materials in accordance

Is this machinery duplicate of a previous case. If so, state name of vessel

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 approved Plans, Secretary's letters and the requirements of the Rules.

The materials and workmanship are good, and engines were found satisfactory when tested in the shop under full working conditions coupled to a Brake.

These engines are in my opinion, suitable for installation in the above vessel.

The amount of Fee ... £ 8. : 0. : 0. { When applied for 1-7- 19 49 Travelling Expenses (if any) £ : 8. : 0. { When received 19

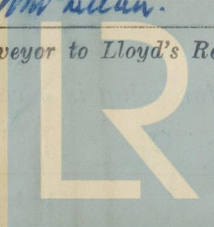
Committee's Minute

FRI. 2 JUN 1950

Assigned

See F.E. mch. rpt.

Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register Foundation

Rpt. 13.

Date of writ

No. in Reg. Book.

35267

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