

RECEIVED

CASTLE-ON-TYNE, No. 109194

6 MAR 1951
Rpt. 4c.
N D.O.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 560

Received at London Office 13 MAR 1951

Date of writing Report 7-3-1951 When handed in at Local Office 12.3.1951 Port of LEEDS.

No. in Survey held at Reg. Book. 40546 on the ^{Single} ~~From~~ ^{Triple} ~~Triple~~ ^{Quadruple} Screw vessel. M.V. "SANDALWOOD" Date, First Survey 20-11-50. Last Survey 22-2-1951. Number of Visits 3.

Tons } Gross 10061.23
Net 5925.05

Built at Sunderland. By whom built J. L. Thompson Ship Year No. 672 When built 1951.

Client. Sunderland Forge. Port belonging to.

Oil Engines made at Leeds. By whom made J. & H. McLaren Ltd. Engine No. A.21394. Contract No. 30890. When made 1951.

Generators made at Sunderland. By whom made Sunderland Forge. Generator No. 43603. When made 1951.

No. of Sets 1 Engine Brake Horse Power 44 M.N. as per Rule 11 Total Capacity of Generators 25 Kilowatts.

Is Set intended for essential services No.

OIL ENGINES, &c.—Type of Engines MR.2 (Mark 2) 2 or 4 stroke cycle 4 Single or double acting Single.

Maximum pressure in cylinders 750 lbs/sq" Diameter of cylinders 142 mm. Length of stroke 200 mm. No. of cylinders 2 No. of cranks 2

Mean effective pressure 90 lbs/sq" 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 Mid. length thickness 43 mm. shrunk Thickness round eye-hole

Flywheel Shaft, diameter as per Rule fitted on end of crankshaft. Intermediate Shafts, diameter as per Rule 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 Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

Cooling Water Pumps, No. 1 Circulating Pump. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 1 Gear Oil Pump.

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 Compound wound, Drip Proof, Continuous Rating.

Pressure of supply 110 volts. Full Load Current 228 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

Details of driven machinery other than generator Consolidated Pneumatic Tool Co. Air Compressor No. F.343887.

PLANS.—Are approved plans forwarded herewith for Shafting 16-2-50. Receivers Separate Tanks 16-2-50.

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,

J. & H. McLAREN LTD,
ENGINEERS, LEEDS, 10.



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Lloyd's Register
Foundation

Dates of Survey while building: During progress of work in shops - - 20-11-50, 9-11-50, 22-2-51.
 During erection on board vessel - -
 Total No. of visits 3

Dates of Examination of principal parts—Cylinders 20-11-50, R.Mcl. Covers 9-11-50, R.Mcl. Pistons 22-2-51. Piston rods -
 Connecting rods 22-2-51. Crank and Flywheel shafts - Intermediate shafts -

Crank shaft Material O.H. Steel Tensile strength 60.5 Tons/sq."
 Elongation on 2" 22.0% Identification Marks L.R. 109 - 25-5-50 J.S.

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

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.)

This Diesel Generator, Air Compressor set has been constructed under special survey of tested materials in accordance with Approved Plans, Secretary's Letter, and the Requirements of the Rules.
 The materials and workmanship are good, and the engine was found satisfactory when tested in the shop under full load conditions.
 This set is, in my opinion, suitable for installation in the vessel for which it is intended.

SURVEY OF MACHINERY
NEWCASTLE-ON-TYNE

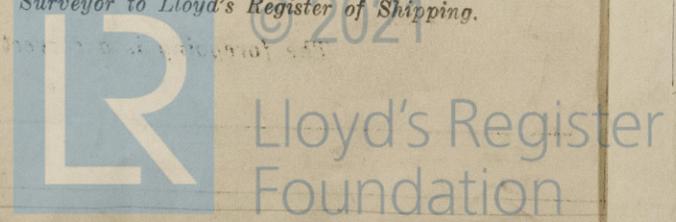
Examined under working conditions & left in good working order
J. A. O'Neil, Newcastle-on-Tyne
March 1952

The amount of Fee ... £ 4 : 0 : 0 When applied for 12. 3. 19 51
 Travelling Expenses (if any) £ : 8 : 0 When received 19

Committee's Minute TUES. 6 MAY 1952

Assigned See F. E. Mchey *per*

R. W. Lellan
 Surveyor to Lloyd's Register of Shipping.



500, L.R.S.-T. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)