

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Bel. 10.437.
No. 50555

Received at London Office 11 JUN 1930

Date of writing Report 19 When handed in at Local Office 10 6 19 30 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 17 12 29 Last Survey 14 May 1930
Reg. Book. Number of Visits 18

Single
on the Twin
Triple
Quadruple

Screw vessel *Messrs Workman Clark's M.V. No 512.*

Tons { Gross
Net

Built at By whom built Yard No. When built
Owners Port belonging to

Oil Engines made at Glasgow By whom made *Fiatt British Auxiliaries Ltd.* Contract No. *1343* When made *1930.*
Generators made at *Sunderland* By whom made *Sunderland Lye & Co. Ltd.* Contract No. When made

No. of Sets *2* Engine Brake Horse Power *200.* Nom. Horse Power as per Rule *52 each* Total Capacity of Generators *135* Kilowatts.

IL ENGINES, &c. Type of Engines *British Fiat Diesel* 2 or 4 stroke cycle *2* Single or double acting *Triple.*

Maximum pressure in cylinders *500.* Diameter of cylinders *255 1/2* Length of stroke *450 1/2* No. of cylinders *3* No. of cranks *3.*

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *334 1/2* Is there a bearing between each crank *Yes*

Revolutions per minute *310.* Flywheel dia. *1800 1/2* Weight *2.6 tons* Means of ignition *Compression* Kind of fuel used *Diesel Oil.*

Crank Shaft, dia. of journals as per Rule *148 5/8* as fitted *160 1/2* Crank pin dia. *160 1/2* Crank Webs Mid. length breadth *212 1/2* Thickness parallel to axis *shrunk*
Mid. length thickness *92 1/2* Thickness around eye hole *shrunk*

Flywheel Shaft, diameter as per Rule *bracket shaft* as fitted *Intermediate Shafts, diameter as per Rule* Thickness of cylinder liners *15 1/2*

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

Are the cylinders fitted with safety valves *Yes.* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *Lagged.*

Cooling Water Pumps, No. *one each engine.* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*

Lubricating Oil Pumps, No. and size *one each engine - gear wheel type 50x40 suction & discharge*

Air Compressors, No. *one each engine* No. of stages *3* Diameters *260, 232 & 56.* Stroke *335* Driven by *hand shaft*

Scavenging Air Pumps, No. *one each engine* Diameter *370* Stroke *410.* Driven by *hand shaft*

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes.*

Can the internal surfaces of the receivers be examined *Yes.* What means are provided for cleaning their inner surfaces *Scoured cones*

Is there a drain arrangement fitted at the lowest part of each receiver *Yes.*

High Pressure Air Receivers, No. *one each engine* Cubic capacity of each *1.41 ft* Internal diameter *210* thickness *11*

Seamless, lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *31.35 tons* Working pressure by Rules *1533.*

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 *Open Compound wound.*

Pressure of supply *220* volts. Load *614.* Amperes. Direct or Alternating Current *Direct.*

If alternating current system, state frequency of periods per second *—*

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off *Yes.*

Generators, do they comply with the requirements regarding rating *Yes.* are they compound wound *Yes*

are they over compound *5 per cent.* *Yes.* if not compound wound state distance between each generator *—*

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*

PLANS. Are approved plans forwarded herewith for Shafting *Yes* Receivers *1-6-29.* Separate Tanks *—*

SPARE GEAR *2 main bearing studs, 1 cylinder cone. 1 set of engine connecting rod bolts & bushes, 2 propeller pins. 1 1/2 sets engine piston rings. 1 set of fuel pump working parts, 3 fuel valve spindles, 1 relief valve, 1 air starting valve. 1 set of compression piston rings, 1 set of cylinder cone studs, 1/2 set of compression section & delivery valves. 2 fuel valves complete. Cylinder liner piston complete. HP compression liner. 1 set of MP&HP comp. piston rings & 2 sets of HP rings. 3 fuel valve flame plates. 3 sets of fuel return valves 5 each*

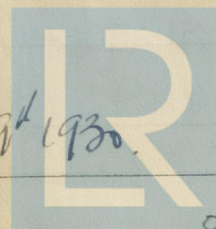
LP. Comp. section & delivery valves. 2 each MP section & delivery valves 3 each HP section & delivery valves. HP intercooling tube stacks.

The foregoing is a correct description,
For FIAT BRITISH AUXILIARIES, LIMITED,

John Rogers
WORKS MANAGER.

Manufacturer.

June 9th 1930.



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Lloyd's Register
Foundation

002916-002922-0210

Dates of Survey (During progress of work in shops - -) 1929 Dec 17. 24 (1930) Jan 10. 15. 20. 31 Feb. 5. 28 Mar 7. 25 Apr 3. 15. 17. 18 May 2. 7. 13
(During erection on board vessel - - -) 14
(Total No. of visits) 18

Notes of Examination of principal parts—Cylinders 15.4.30. Covers 2.5.30. Pistons 15.4.30. Piston rods ✓
Connecting rods 29.3.30. Crank and Flywheel shaft 27.11.29 Forging 10.1.30 Intermediate shaft ✓
Crank and Flywheel shaft, Material 17.11.29 Forging 15.5.30 Identification Marks 16.3.30 Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case? No. If so, state name of vessel: Workman blower 510x511. No Defects No 49954+51.

General Remarks (State quality of workmanship, opinions as to class, etc.)

These engines have been built under special licence and as approved. The materials & workmanship are good. On completion they have been tested on the bench with satisfactory results.

The engines are, in my opinion, eligible for inclusion in the classification and notation of +L.M.C. of the vessel for which they are intended.

The engines have been despatched to Belfast.

These engines have been efficiently installed in the vessel and tried out under working conditions with satisfactory results.

John. K. Williams.
Belfast.

1.6.
10/6/30.

Rpt. 5a.
Date of writing
No. in Reg. Book.
86096
Master
Engines made
Boilers made
Nominal H.P.
MULTI
Manufactured by
Total Heat
No. and D.
Tested by
Area of Fire
Area of evap.
In case of
Smallest diameter
Smallest diameter
Largest internal
Thickness
long. seams
Percentage
Percentage
Thickness
Material
Length of
Dimensions
End plates
How are
Tube plates
Mean pitch
Girders to
at centre
in each
Tensile strength
Pitch of
Working pressure
Thickness
Pitch of
Working pressure
Diameter
Working pressure
Diameter

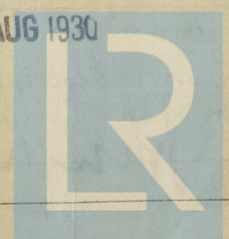
1m. 7.26—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 10 : 8 : 10 JUN 1930
Travelling Expenses (if any) £ : :
When received, 14.8.1930

Joseph Edmund
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 JUN 1930
Assigned TRANSMIT TO LONDON

FRI. 22 AUG 1930



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