

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 101595

Date of writing Report 4 June 1935 When handed in at Local Office

15 JUN 1935

Received at London Office

15 JUN 1935

No. in Survey held at Bedford

Reg. Book.

Date, First Survey 22 January 1935 Last Survey 21 May 1935.

Number of Visits 12.

Single
on the Twin
Triple
Quadruple } Screw vessel

M V K A R U

Tons { Gross 1044
Net 529

Built at Glasgow

By whom built A. Stephen & Son Ltd

Yard No. 546 When built 1935

Owners Union Steamship Co. of New Zealand Ltd.

Port belonging to Wellington

Oil Engines made at Bedford

By whom made W. H. Allen Sons & Co. Ltd.

Contract No. K1/48375 When made 1935

Generators made at Bedford

By whom made W. H. Allen Sons & Co. Ltd.

Contract No. E1/48376 When made 1935

No. of Sets 3

Engine Brake Horse Power 268

(3 @ 89.3)

Nom. Horse Power as per Rule 76.5

Total Capacity of Generators 180 Kilowatts.

(3 @ 60 kW.)

OIL ENGINES, &c.—Type of Engines Airless injection

(6518)

2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 680 lb/sq. in.

Diameter of cylinders 14.5 in.

Length of stroke 18.0 in.

No. of cylinders 6 each

No. of cranks 6 each

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

15.4 in.

Is there a bearing between each crank 1/2

Revolutions per minute 900

Flywheel dia. 76.0 in.

Weight 370 lb.

Means of ignition Compression

Kind of fuel used Heavy oil.

Crank Shaft, dia. of journals

as per Rule 7.9 in.

as fitted 10.0 in.

Crank pin dia. 9.0 in.

Crank Webs

Mid. length breadth 13.4 in.

Mid. length thickness 3.6 in.

Thickness parallel to axis

Thickness around eyehole

Flywheel Shaft, diameter

as per Rule

as fitted Crank Shaft.

Intermediate Shafts, diameter

as per Rule

as fitted

Thickness of cylinder liners 8 in.

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Yes

Means of lubrication Forced.

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. 3. (1 per engine)

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

Lubricating Oil Pumps, No. and size

3. — 1 per engine each of 6 1/4 gallon per minute.

Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

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

1/2

Can the internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their inner surfaces

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

Yes

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. Two

Total cubic capacity 16.24 cu. ft.

Internal diameter 14 in.

thickness 1/2 in.

Seamless, lap welded or riveted longitudinal joint

Seamless

Material Steel

Range of tensile strength 26/30

Working pressure by Rules 770 lb/sq. in.
Actual working pressure 500 lb/sq. in.
Tested 21.5.35 to 1000 lb/sq. in.

ELECTRIC GENERATORS:—Type E.V. open marine.

Rating 63° F.

Pressure of supply 220 volts.

Load (each)

272 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 compounded 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

1/2

PLANS. Are approved plans forwarded herewith for Shafting

24.8.33

(If not, state date of approval)

Receivers Christchurch Tube Co.

Separate Tanks

SPARE GEAR

6 pistons complete, 6 liners, 2 fuel pumps, 6 delivery & 3 suction pipes for fuel pumps.

15 nozzles 2 cylinder heads complete with all valves, 10 inlet & 10 exhaust valves, 4 push rod

assemblies 1 complete rocker assembly. 4 inlet and exhaust valve guides, 1 cam shaft cham

12 inlet & exhaust valve springs 4 fuel pump delivery valve springs, 6 fuel pump main springs

1 complete set main bearings, 1 connecting rod complete, 1 set piston rings for one piston

1 set studs for one cylinder cover, 2 bottom end bolts 2 main bearing bolts, 1 starting valve

1 impeller for cooling water pump.

1 armature, 1 set brushes & holders, 1 set field coils 1 end bearing bush.

The foregoing is a correct description.

W. H. ALLEN, SONS & Co., Ltd.

H. Geo. Kimber.

Manufacturer.



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Lloyd's Register
Foundation 7-017

004300-004307-0177

Dates of Survey while building
During progress of work in shops - -
During erection on board vessel - - -
Total No. of visits

1935 Jan. 22 Feb. 19. 22 March. 4. 8. 12. 15. 20. April. 10. 15. May. 10. 21. - 12 visits

Dates of Examination of principal parts - Cylinders 14.2.35 8.3.35 Covers 22.2.35 15.3.35 Pistons 22.2.35 8.3.35 Piston rods

Connecting rods 8.3.35

Crank and Flywheel shafts 22.1.35

Intermediate shaft

Crank and Flywheel shafts, Material

A. D. Steel

Identification Mark

K1/48375/A
LLOYOS 5367
SA 4-1-35
SAL 22-1-35

K1/48375/B
LLOYOS 5366
SA 4-1-35
SAL 22-1-35

K1/48375/C
LLOYOS 5366
SA 21-12-34
SAL 22-1-35

Intermediate shafts, Material

Identification Marks

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.) Workmanship good.

These three diesel-electric generating sets have been specially surveyed during construction. The materials used have been made at works approved by the Committee and tested by the Surveyors to this Society.

Full power, overload, governing and modulation tests were witnessed and found satisfactory.

They have now been dispatched to Glasgow for fitting onboard.

Attached hereto Longing Certificate 3 m N°

Making Certificate for 3 working and 1 spare armature

Made at Hamworthy Engineering Co.

1m. 6.31 - Transfer.

The amount of Fee ... £ 12.12.0

Travelling Expenses (if any) £ 2.7.0

When applied for,

15 JUN 1935

When received,

1/8/35

G. W. Lang

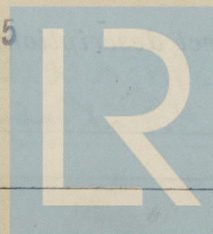
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 23 JUL 1935

9.5.m.

FRI. 26 JUL 1935

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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