

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 14714

Received at London Office

8-MAR-1949

Date of writing Report

19

When handed in at Local Office

7/3/49

Port of

BELFAST

Visits included in Rpt 4a.

No. in Survey held at

BELFAST

Date, First Survey

Last Survey

19

Reg. Book.

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

MAGDALENA

Tons Gross  
Net

Built at

BELFAST

By whom built

HARLAND & WOLFF LTD.

Yard No.

1354

When built

1949

Owners

ROYAL MAIL LINES LTD.

Port belonging to

LONDON

Oil Engines made at

BELFAST

By whom made

HARLAND & WOLFF LTD.

Contract No.

1354

When made

1949

Generators made at

- D° -

By whom made

- D° -

Contract No.

1354

When made

1949

No. of Sets

2

Engine Brake Horse Power

540

M.N. as per Rule

270

Total Capacity of Generators

1740

Kilowatts

Set intended for essential services

YES

OIL ENGINES, &c.—Type of Engines

Heavy oil airless injection 2 or 4 stroke cycle

4 Single or double acting

Maximum pressure in cylinders

400 lbs

Diameter of cylinders

380 7/8

Length of stroke

570 7/8

No. of cylinders

6

Mean indicated pressure

100 lbs

Firing order in cylinders

1, 3, 5, 6, 4, 2

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

435

Is there a bearing between each crank

yes

Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

4500

Revolutions per minute

300

Flywheel dia.

2210

Weight

6230 lbs

Means of ignition

Compression

Kind of fuel used

Diesel

Crank Shaft, dia. of journals

as per Rule

app.

as fitted

280 7/8

Crank pin dia.

230 7/8

Crank Webs

Mid. length breadth

36 1/4

585 as for MV 1348

Thickness parallel to axis

125 7/8

Mid. length thickness

125 7/8

shrink

Thickness round eye hole

170 7/8

Flywheel Shaft, diameter

as per Rule

app.

as fitted

280 7/8

Intermediate Shafts, diameter

as per Rule

app.

as fitted

General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

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

yes

Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

lagged

Cooling Water Pumps, No.

10606

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

—

Lubricating Oil Pumps, No. and size

23.5 tons/hour

Air Compressors, No.

2

No. of stages

Two

Diameters

100 7/8 - 88 7/8

Stroke

80 7/8

Driven by

Steam engine 144  
Electric motor 194

Scavenging Air Pumps, No.

—

Diameter

—

Stroke

—

Driven by

—

AIR RECEIVERS:—Have they been made under Survey

yes

State No. of Report or Certificate

—

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

Manhole

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.

2

Total cubic capacity

150 cub.ft.

Internal diameter

3' 4 3/8"

thickness

1/16"

Seamless, lap welded or riveted longitudinal joint

—

Material

Steel

Range of tensile strength

26/33 tons

Working pressure by Rules

356 lbs

ELECTRIC GENERATORS:—Type

Drift proof

Pressure of supply

225 volts

Full Load Current

1600

Amperes

Direct or Alternating Current

Direct current

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

yes

Are the generators under 100 kw. full load rating, have the makers supplied certificates of test

yes

and do the results comply with the requirements

—

Are the generators 100 kw. or over have they been built and tested under survey

yes

Details of driven machinery other than generator

—

PLANS.—Are approved plans forwarded herewith for Shafting

yes

Receivers

yes

Separate Tanks

—

Have Torsional Vibration characteristics if applicable been approved

app.

Landon 19-3-47

Armature shaft Drawing No.

—

PREPARE GEAR

See list attached

for 300.7

The foregoing is a correct description,

FOR HARLAND & WOLFF, LIMITED

Manufacturer.

Marshall  
Secretary



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Lloyd's Register  
Foundation

12-0073



4<sup>c</sup> 14714.

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

Dates of Examination of principal parts—Cylinders 12-3-48 13-4-48 14-5-48  
Covers 24-4-48 4-4-48 Pistons 23-4-48  
No 21-4-48  
Intermediate shafts.

Connecting rods 16-2-48 24-2-48 Crank and Flywheel shafts 2 30-6-48

Crank shaft Material Combined Webs of best Steel Tensile strength 28/32 tons  
Elongation 27-34% Identification Marks No 1 Lloyd's No 1201  
No 2 Lloyd's No 1212

Flywheel shaft, Material

Identification marks on Air Receivers

LLOYD'S  
No 428  
T.P. 584 lbs  
W.P. 356 lbs  
R.O.B. 30-9-48

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.) These engines have been constructed under special survey in accordance with the Rules and approved plans

The materials and workmanship are good  
The engines have been satisfactorily installed on board the vessel, tried under working conditions and found in good condition.

The amount of Fee ... £ : : When applied for 19.

Travelling Expenses (if any) £ : : When received 19.

Committee's Minute FRI. 22 APR 1948

Assigned See F.E. mch. rpt.

Rpt. 13.

Date of writing

No. in S  
Reg. Boo

95000  
SWP.

Built at

Owners

Electrical In

Is vessel

Have plans b

Heating 22

has the gov

trip switch

if not comp

arranged to

Negative

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Room

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and for ea

& Aux

Are comp

ammeters

equaliser

Switches

per Rule

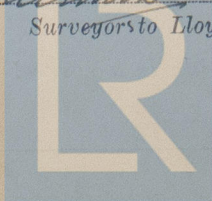
protection

did they

Cables, a

state max

square inc



Lloyd's Register  
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