

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 147114

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 4c.

No. in Reg. Book

Survey held at

BELFAST

Date, First Survey

Last Survey

19

Number of Visits

Single
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

Is 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 Single

Maximum pressure in cylinders 400 lbs Diameter of cylinders 380 7/8 Length of stroke 570 7/8 No. of cylinders 6 No. of cranks 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 m² or Kg.-cm.²) 4500 Revolutions per minute 300

Flywheel dia 2210 Weight 6230 kgs 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

Flywheel Shaft, diameter as per Rule app. as fitted 280 7/8 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 yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

Cooling Water Pumps, No. 1060 ltr/hr F.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 25.5 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 144

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 5/8 thickness 1/16

Seamless, lap welded or riveted longitudinal joint Welded Material Steel Range of tensile strength 26/33 tons Working pressure by Rules 356 lbs

ELECTRIC GENERATORS:—Type Drip proof Pressure of supply 225 volts Full Load Current 1600 Amperes Direct or Alternating Current Direct current

Is an 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

Are shields that they cannot be accidentally earthed, short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

Do the generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements

Do the generators are 100 kw. or over have they been built and tested under survey yes

Give 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. London 19-3-47 Armature shaft Drawing No.

PREPARE GEAR See list attached for 300 rpm

The foregoing is a correct description,

FOR HARLAND AND WOLFF, LIMITED

Manufacturer.

Secretary



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Lloyd's Register Foundation

12-0073

4^c 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*
27-4-48 Covers *7-7-48* Pistons *23-7-48* Piston rods.....

Connecting rods *16-2-48* *21-2-48* Crank and Flywheel shafts *2-30-6-48* Intermediate shafts.....

Crank shaft { Material *Combined Webs of best Steel* Journals *Steel* Tensile strength *28/32 tons*
 Identification Marks *Nº 1 Lloyd's Nº 1207*
 Elongation *27-34%* Identification Marks *Nº 2 Lloyd's Nº 1212*

Flywheel shaft, Material.....

Identification marks on Air Receivers.....

LLOYD'S
 Nº 428
 T.P. 584 HBS
 NP 356 HBS
 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.

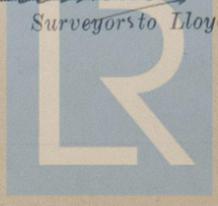
The amount of Fee ... £ : : When applied for 19.....

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

Committee's Minute *FRI. 22 APR 1948*

Assigned *See F.E. mch. rpt.*

A. Fairclough *R. Russell*
 Surveyors to Lloyd's Register of Shipping.



Lloyd's Register
 Foundation

Rpt. 13.

Date of writing.....

No. in S Reg. Boo *9500*

Built at.....

Owners.....

Electrical I.....

Is vessel j.....

Have plans b.....

Heating *22*

has the gov.....

trip switch.....

if not comp.....

arranged to.....

Negative

test for ma.....

of the gene.....

near unprot.....

injury and.....

contact *Room*

are they in.....

and oil *4*

material is.....

semi-insula.....

Is the cons.....

to pilot an.....

side of swit.....

circui

trip a

and for ea.....

e. Aux

Are comp.....

ammeters.....

equaliser.....

Switches.....

per Rule.....

protection.....

did they.....

Cables, a.....

state max.....

square inc.....

(MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)