

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 100,745

Date of writing Report 29th Oct^r 1934 When handed in at Local Office 8 NOV 1934 Port of London
 No. in Survey held at Bedford Date, First Survey 13 June 1934 Last Survey 19th October 1934
 Reg. Book. Number of Visits 22 (In 3 yrs)

on the Single Twin Triple Quadruple Screw vessel M. V. MANOORA Tons { Gross 10856
 Net 6261

Built at Glasgow By whom built Alex. Stephens & Son Ltd. Yard No. 540 When built 1934
 Owners Adelaide Steam Shipping Co. Ltd. Port belonging to Melbourne

Oil Engines made at Bedford By whom made W. H. Allen & Son Ltd. Contract No. 44019 When made 1934
 Generators made at Bedford By whom made W. H. Allen & Son Ltd. Contract No. 44020 When made 1934

No. of Sets 4 Engine Brake Horse Power 1960 Nom. Horse Power as per Rule 40490 Total Capacity of Generators 1340 Kilowatts.
40335

OIL ENGINES, &c.—Type of Engines (6547) Heavy oil. Solid injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 650 lb. Diameter of cylinders 350 mm Length of stroke 470 mm No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 420 mm Is there a bearing between each crank Yes

Revolutions per minute 350 Flywheel dia. 1800 mm Weight 8500 lb. Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 200 mm Crank pin dia. 210 mm Crank Webs Mid. length breadth 310 mm Thickness parallel to axis shrunk
as fitted 210 mm Mid. length thickness 105 mm Thickness around eye hole shrunk

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 26 mm
as fitted Crank Shaft. as fitted

Is a governor or other arrangement fitted to prevent racing of the engine when disconnected Yes Means of lubrication Forced.

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. None fitted Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size One rotary, gear type. 20 1/2 gallons per minute. each engine.

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 Yes

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. 4. Total cubic capacity 4014 = 56 cu ft. Internal diameter 20 1/8" thickness Shell 7/16 Top 9/16 Bot. 1/16

Seamless, lap welded or riveted longitudinal joint D.R. lap. Material Steel Range of tensile strength 26/30 ton. Working pressure by Rules 360 lb.

ELECTRIC GENERATORS:—Type Marine type. open.

Pressure of supply 220 volts. Load (each) 1520 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 Yes

PLANS. Are approved plans forwarded herewith for Shafting 5-12-29 Receivers 13/2/31/3/10/34 Separate Tanks —
 (If not, state date of approval)

SPARE GEAR See list attached hereto. for engine spars

Electrical spars. 6 short coils, 6 main coils, 1 I.P. coil, 54 bush trees & bushes

Dates of Survey while building { During progress of work in shops - 1934 June 13, 22, 26, 28. July 4, 12, 17. Aug 17, 21, 29, 31. Sept 13, 18, 21, 25, 26, 27. Oct 2, 7, 10, 16, 19.
During erection on board vessel - - -
Total No. of visits 22 (In Shops)

Dates of Examination of principal parts—Cylinders 22/6/34 to 7/10/34 Covers 29/8/34 to 16/10/34 Pistons 29/8/34 - 24/9/34 Piston rods —

Connecting rods 21/8/34 to 16/10/34 Crank and Flywheel shaft 21/8/34 - 18/9/34 - 25/9/34 Intermediate shaft —

Crank and Flywheel shaft, Material 4.2. Steel Identification Mark see below Intermediate shafts, Material — Identification Marks —

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. Workmanship good.

These four sets of auxiliary oil engines with their direct coupled electric generators have been specially surveyed during construction and are in accordance with the approved plans & the Rules. The materials used have been made at works approved by the Committee and tested by the Surveyors to this Society.

They have satisfactorily withstood six hours full power, two hour overload, governing and imitation tests in the shops and have now been dispatched to Glasgow for fitting onboard.

They will merit in my opinion the notation of Electric Light in the Register Book when fitted onboard and tested as required by the Rules.

Crank shafts stamped thus:-

K/44019/A
Lloyd 4924
JWL 9.7.34
H.K. 21.8.34

K/44019/B
Lloyd 9500
G.A. 22.8.34
GAL 18.9.34

K/44019/C
Lloyd 42
SW 10.7.34
W.K. 21.8.34

K/44019/D
Lloyd 4736
S.A. 30.5.34
SAL 25.9.34

Attached hereto Forging certificate 4 in 1.
Certificate for an receiver
List of spare gear.

The amount of Fee ... £ 107:6-0
24 m (5604 513) NHP
Travelling Expenses (if any) £ 5:16:7

When applied for,
- 3 NOV 1934

When received,
1-1-1935 JHN

Geo. A. Lang
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 FEB 1935

Assigned See Gls. Rpt. No. 54412