

EMERGENCY REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 100,745
20 FEB 1935

Received at London Office 8 NOV 1934

Date of writing Report 29th Oct 1934 When handed in at Local Office 8 NOV 1934 Port of London

No. in Survey held at Bedford Date, First Survey 21st August 1934 Last Survey 19th October 1934

Reg. Book. Single on the Twin Triple Quadruple Screw vessel M. V. MANOORA Tons { Gross 0856 Net 6261

Built at Glasgow By whom built Alex. Stephen & 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. 45747 When made 1934

Generators made at Bedford By whom made W. H. Allen & Son Ltd. Contract No. 45749 When made 1934

No. of Sets 1 Engine Brake Horse Power 60 Nom. Horse Power as per Rule Total Capacity of Generators 39 Kilowatts.

OIL ENGINES, &c.—Type of Engines (4S 18) Heavy oil. Solid injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 700 lb. Diameter of cylinders 145^{mm} Length of stroke 180^{mm} No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 154^{mm} Is there a bearing between each crank Yes

Revolutions per minute 900 Flywheel dia. 780^{mm} Weight 0.35 tons Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 78.2^{mm} as fitted 100^{mm} Crank pin dia. 90^{mm} Crank Webs Mid. length breadth 134^{mm} Mid. length thickness 36^{mm} Thickness parallel to axis shrunk Thickness around eye hole

Flywheel Shaft, diameter as per Rule as fitted Crank shaft Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 8^{mm}

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 No. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

Cooling Water Pumps, No. 1. centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 1. rotary. 3 gallons 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 Yes

Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

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

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. 1 (C.T.G. 4371683) Total cubic capacity 2¹/₄ cu. ft. Internal diameter 10" thickness 1/4" 5-37

Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 26/30 t² Working pressure by Rules 360 lb²

ELECTRIC GENERATORS:—Type Enclosed. Ventilated. Drip proof.

Pressure of supply 220 volts. Load 177 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 24.8.33 Receivers Separate Tanks

(If not, state date of approval)

SPARE GEAR See list attached hereto. for engine spares

Electrical spares. 1 roller bearing for armature 8 bushes and 2 bush boxes.

The foregoing is a correct description,
W. H. ALLEN, SONS & CO. LTD.,
Manufacturers.

Dates of Survey while building { During progress of work in shops - 1934. Aug 21. Sept 21. 27. Oct 2. 10. 19 = 6 Visits
 { During erection on board vessel -
 Total No. of visits

Dates of Examination of principal parts—Cylinders 21.9.34 Covers 21.9.34 Pistons 21.9.34 Piston rods —

Connecting rods 21.9.34 Crank and Flywheel shaft 21.8.34 Intermediate shaft —

Crank and Flywheel shaft, Material *V.D. Steel* Identification Mark *K/45747*
LL04035077
SA 20.7.34 Intermediate shafts, Material — Identification Marks —
WK 21.8.34

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.*

This emergency generating set has 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. It satisfactorily withstood full power, overload, and insulation tests and has now been dispatched to Glasgow for fitting onboard.

Attached hereto . *Forging certificate of crank shaft.*
List of spare gear.
Certificate for an receiver.

The amount of Fee ... £ 3 - 3 - 0

Travelling Expenses (if any) £ *✓*

When applied for *3 NOV 1934*

When received, *1/1/1935 JRM*

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

Committee's Minute

GLASGOW, 19 FEB 1935

Assigned

See Es. Rph. No. 54412