

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 13838

22 JUL 1953

Date of writing Report 26.6.53 When handed in at Local Office 4.7.53 Received at London Office
 No. in Survey held at TRIESTE Date, First Survey See Rpt. 4b Last Survey 17 JUNE 1953
 Reg. Book. 91629 on the ~~Single~~ ~~Triple~~ ~~Quadruple~~ Screw vessel Motor Vessel "E.L. N.I.L." Number of Visits
 Built at TRIESTE By whom built Cantieri Riuniti dell'Adriatico Yard No. 1779 When built 1953
 Owners Alexandria Navigation Co., S.A.E. Port belonging to Alexandria
 Oil Engines made at Trieste By whom made Cantieri Riuniti dell'Adriatico Contract No. 5583/4/5 When made 1953
 Generators made at Monfalcone By whom made DO Contract No. 78288/9 When made 1953
 No. of Sets 3 Engine Brake Horse Power 1 at 202 M.N. as per Rule 1 at 50.5 Total Capacity of Generators 324.5 Kilowatts.
 Is Set intended for essential services yes 2 at 126 2 at 31.5 each

OIL ENGINES, &c.—Type of Engines C.R.D.A.—SILZER 3 and 5/BH 22 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 60 kg/cm² Diameter of cylinders 220 mm Length of stroke 320 mm No. of cylinders 1 at 5 No. of cranks 5 & 3
 Mean indicated pressure 5.92 kg/cm² Firing order in cylinders 1, 3, 5, 4, 2, 2 at 3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 248 mm
 Is there a bearing between each crank yes Moment of inertia of flywheel (16 m² or Kg.-cm²) 1200 P.D. 2 Kg/cm² 1450
 Flywheel dia. 1500 mm Weight 820 Kg. Means of ignition Comp'n Kind of fuel used Heavy Oil
 1500 mm 956 Kg. 278 & 230

Crank Shaft, dia. of journals as per Rule as appd. Crank pin dia. 145 mm Crank Webs 5 & 3 cyl. 64 mm Thickness parallel to axis
 as fitted 155 mm Mid. length breadth 278 & 230 shrunk Thickness round eye-hole
 GEN. SHAFT as per Rule as appd. Intermediate Shafts, diameter as per Rule as fitted General armature, moment of inertia (16 m² or Kg.-cm²) 5 cyl. 250
 Flywheel Shaft diameter as fitted 160 mm 100 mm 3 cyl. 70

Are means provided to prevent racing of the engine when disengaged 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 yes
 1 attached on each Cooling Water Pumps, No. 2 standby Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Lubricating Oil Pumps, No. and size 1 attached to each 1600 Lit./hr. 1 standby 9 tons/hr.
 Air Compressors, No. 2 No. of stages 2 Diameters Capacity 135 cu. ft./stroke Driven by Elect. Motors
 Scavenging Air Pumps, No. 1 Diameter Stroke Driven by

AIR RECEIVERS—Have they been made under Survey yes State No. of Report or Certificate Genoa 93/2

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. 1 (M.E. Air Receiver also connected to line) Total cubic capacity 100 Lit. Internal diameter 303 mm thickness 7.5 mm

Seamless, lap welded or riveted longitudinal joint seamless Material S.M.S. Range of tensile strength 60.6 Kg/mm² Working pressure by Rules 40 Kg/cm²

ELECTRIC GENERATORS:—Type C.R.D.A. 1 at D.316 2 at D.160 Protected self ventilated
 Pressure of supply 220 volts. Full Load Current 1 at 136.5 Amperes. Direct or Alternating Current D.C.

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

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

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

Details of driven machinery other than generator none

PLANS.—Are approved plans forwarded herewith for Shafting yes Receivers Separate Tanks

Have Torsional Vibration characteristics if applicable been approved 11th Nov. 1952 Armature shaft Drawing No. 6543-15/1
 (state date of approval) 6660-15

SPARE GEAR To Rule requirements.

Cantieri Riuniti dell'Adriatico is a correct description,
 FABBRICA MACCHINE S. ANGELO

Manufacturer.

Dates of Survey while building { During progress of work in shops - -) Please see Rpt. 4b
{ During erection on board vessel - -)
Total No. of visits

Dates of Examination of principal parts—Cylinders Sept. 1952 Covers Nov/Dec. 1952 Pistons Nov. 1952 Piston rods ✓

Connecting rods May 1952 Crank and Flywheel shafts 23.6.52 - 15.9.52 13.10.52 Intermediate shafts ✓

Crank shaft { Material E.F.S. Tensile strength 5throws 57.2 kg. 3throws 53.1 Kg/mm²
Elongation 5throw 31% on 4d 3throw 35% on 4d 33.3% on 4d Identification Marks LLOYD'S S.S. 2086, 2240 & 2241
(with Surveyors' initials & date)

Flywheel shaft, Material Identification Marks ✓

Identification marks on Air Bottle Receivers DAIMLER 2-61054

LLOYD'S TEST 80 Kg/cm² W.P. 40 Kg/cm²

G.M. 31.10.52

Is this machinery duplicate of a previous case yes If so, state name of vessel M/V "STAR OF ALEXANDRIA" (C.R.D.A. Yard 1778)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These engines have been constructed under special survey in accordance with the Society's Rules, the Secretary's letters and approved plans.

The important forgings and castings were made, inspected and tested in accordance with the Rules.

The workmanship and materials are good.

These engines have been installed on board in an efficient manner and found satisfactory when tested under full working conditions.

The emergency generator engine made by Motorwerke Mannheim A.G., N°.2725/43 Augsburg Report

4c N°.169, has also been fitted on board in an efficient manner and found satisfactory under full working load.

In my opinion these engines are eligible for full classification.

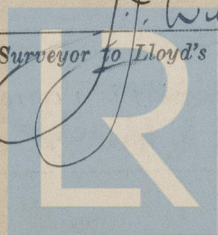
The amount of Fee ... £ 69.10.00 When applied for 4 7 19 13

Travelling Expenses (if any) £ sec Rpt 4b When received 19

Committee's Minute FRIDAY - 7 AUG 1953

Assigned See F.E. Welch. rpt.

A. Wilson
Surveyor to Lloyd's Register of Shipping.



Lloyd's Register
Foundation