

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 169

Date of writing Report 21st Oct. 1952 When handed in at Local Office 19 Port of Augsburg Received at London Office 17.10.52

No. in Survey held at Mannheim Date, First Survey 17th September, Last Survey 1st October, 1952
Reg. Book. Number of Visits 2

on the Single Screw vessel "EL NIL" Tons (Gross 1778, Net 1778)
Triple
Quadruple

Built at --- By whom built --- Yard No. --- When built ---

Contractors: Cantieri Riuniti dell'Adriatico, Trieste Port belonging to Italy

Oil Engines made at Mannheim By whom made Motorenwerke Mannheim A.G. Engine No. 2725/43+44 When made 1952

Generators made at --- By whom made --- Generator No. --- When made ---

No. of Sets 2 B.H.P. of each Set 33,6 M.N. as per Rule --- Capacity of each Generator --- Kilowatts.

Is Set intended for essential services ---

OIL ENGINES, &c.—Type of Engines M.W.M. Standard Type KDW 415 D 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 50 atm. Diameter of cylinders 100 mm Length of stroke 150 mm No. of cylinders 3 No. of cranks 3

Mean indicated pressure 7,4 atm. Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 292/173 mm

Is there a bearing between each crank --- Moment of inertia of flywheel (16 m² or Kg.-cm.²) 22 kgm² Revolutions per minute 1400

Flywheel dia. 540 mm Weight 114 kg Means of ignition whirl chamber Kind of fuel used gas oil

Crank Shaft, drop dia. of journals 70/70/65 mm Crank pin dia. 75 mm Crank Webs --- Mid. length breadth 112 mm Thickness parallel to axis ---
--- as fitted --- Mid. length thickness 2,5 mm Thickness round eye-hole ---

Flywheel Shaft, diameter --- Generator armature, moment of inertia (16 m² or Kg.-cm.²) ---

Are means provided to prevent racing of the engine 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. and how driven 1 x 2400 ltr./h Is the sea suction provided with an efficient strainer which can be cleared within the vessel ---

Lubricating Oil Pumps, No. and size 1 x 350 ltr/h

Air Compressors, No. --- No. of stages --- Diameters --- Stroke --- Driven by ---

Scavenging Air Pumps or Blowers, No. --- How driven ---

AIR RECEIVERS:—Have they been made under Survey --- State No. of Report or Certificate ---

(other than main engines)
State full details of safety devices ---

Can the internal surfaces of the receivers be examined and cleaned ---

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 ---

Starting Air Receivers, No. --- Total cubic capacity --- Internal diameter --- thickness ---

Seamless, lap welded or riveted longitudinal joint --- Material --- Range of tensile strength --- Working pressure ---

ELECTRIC GENERATORS:—Type ---

Pressure of supply --- volts. Full Load Current --- Amperes. Direct or Alternating Current ---

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 --- Generators, are they compounded as per Rule --- is an adjustable regulating resistance fitted in series with each shunt field ---

Are all terminals accessible, clearly marked, and furnished with sockets --- Are they so spaced ---

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

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

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

Details of driven machinery other than generator ---

PLANS.—Are approved plans forwarded herewith for Shafting appr. 8.6.50 Receivers --- Separate Tanks ---
(If not, state date of approval)

Have Torsional Vibration characteristics if applicable been approved to be forwarded by Yard Armature shaft Drawing No. ---
(State date of approval and name of previous duplicate case, if any)

Has the spare gear required by the Rules been supplied yes

The foregoing is a correct description,
MOTOREN-WERKE MANNHEIM A.-G.
VORM. BENZ ABT. STAT. MOTORENBAU
Manufacturer.



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Dates of Survey while building
 During progress of work in shops - - 17th September and 1st October, 1952
 During erection on board vessel - - - - -
 Total No. of visits two

Dates of Examination of principal parts—Cylinders 17.9.52 Covers 17.9.52 Pistons 17.9.52 Piston rods - -
 Connecting rods 17.9.52 Crank and Flywheel shafts 17.9.+ 1.10.52 Intermediate shafts - -

Crank shaft
 Material S.M. Steel Tensile strength 65,3 kg/mm²
 Elongation on 50 mm = 28,0 % Identification Marks LLOYDS 8 H.B.

Flywheel shaft, Material - - Identification Marks - -

Identification marks on Air Receivers - -

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.)

These heavy oil auxiliary engines have been constructed under special survey in accordance with the approved plans, the Secretary's letters and instructions thereto. The material used in the construction is good and the workmanship was found to be satisfactory. The engines have been tested running on Makers test bed under full-, over-, and partial loads with good results. In my opinion the vessel for which these engines are intended will be eligible for the notation \star L.M.C. (with date) when the whole machinery has been satisfactorily fitted aboard the vessel and has been tried under full working conditions.

Amount of Fee ... RM : 160.-
 Test bed trial RM : 50.-
 Travelling Expenses (if any) RM : 50.-

When applied for 19
 When received 19

M. S. ...

Surveyor to Lloyd's Register of Shipping.



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Committee's Minute

Signed

EMERGENCY GENERATOR

ENGINES



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