

RECEIVED

25 OCT 1948

IN 48.0

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Bel. 14.714

No. 117261

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Received at London Office

Date of writing Report 11-10-1948. When handed in at Local Office 20 Oct 1948 Port of Ipswich.

No. in Survey held at Colchester. Date, First Survey 21 June 1948 Last Survey 8-10-1948. Number of Visits THREE.

Single on the Twin Triple Quadruple Screw vessel. "MAGDALENA" Tons Gross Net.

Built at By whom built Harland & Wolff Ltd. Yard No. 1354. When built.

Owners Shaw Saville & Albion Lines Ltd. Port belonging to.

Oil Engines made at Colchester By whom made Davey Paxman & Co. Ltd. Contract No. 7362. When made 1948.

Generators made at Ipswich By whom made Lucas & Co. Ltd. Contract No. When made.

No. of Sets 6. Engine Brake Horse Power 144 M.N. as per Rule. Total Capacity of Generators 100 Kilowatts.

Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines Heavy Oil (8 RW type) 2 or 4 stroke cycle 4 Single or double acting Single.

Maximum pressure in cylinders 750 lb. Diameter of cylinders 5 1/2" Length of stroke 7" No. of cylinders 8 No. of cranks 8.

Mean indicated pressure 120 lb. Firing order in cylinders 1-5-2-6-8-4-7-3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 65 1/8".

Is there a bearing between each crank. Moment of inertia of flywheel (16 m² or Kg.-cm.²) 18,000 16,950. Revolutions per minute 1250.

Flywheel dia. 27" Weight 520 lb. Means of ignition Compression Kind of fuel used Diesel.

Crank Shaft, dia. of journals as per Rule 4" as fitted 4" Crank pin dia. 3 5/8" Crank Webs Mid. length breadth 5" Thickness parallel to axis.

Flywheel Shaft, diameter as per Rule. Intermediate Shafts, diameter as fitted. General armature, moment of inertia (16 m² or Kg.-cm.²).

Are means provided to prevent racing of the engine when declutched. Means of lubrication Forced Kind of damper if fitted.

Are the cylinders fitted with safety valves. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material.

Cooling Water Pumps, No. 6. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size 6. Standard.

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

Scavenging Air Pumps, No. Diameter. Stroke. Driven by.

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

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

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. Total cubic capacity. Internal diameter. thickness.

Seamless, lap welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure by Rules.

ELECTRIC GENERATORS:—Type Strip Proof.

Pressure of supply 225 volts. Full Load Current 644 Amperes. Direct or Alternating Current Direct.

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 shields 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, Duplicate copies app. 1/5/48 receivers. Separate Tanks 8-10-47.

Have Torsional Vibration characteristics if applicable been approved. (state date of approval) To be submitted. Armature shaft Drawing No.

PREPARE GEAR



Manufacturer.



4^c 117261

Dates of Survey while building: During progress of work in shops - - 1948 June 21, Sep 8, Oct 8
 During erection on board vessel - - 3 (in shops)
 Total No. of visits

Dates of Examination of principal parts—Cylinders 10.8.48 Covers 8.9.48 Pistons 10.8.48 Piston rods ✓
 Connecting rods 10.8.48 Crank and Flywheel shafts 10.8.48 Intermediate shafts ✓
 Crank shaft Material Steel Tensile strength 43.6 tons
 Elongation 31% Identification Marks 7-5284
 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, etc.)

The engine has been constructed under Special Survey in accordance with the Rules requirements & the materials & workmanship are of good description. The engine has been tested under full load conditions and found satisfactory & has been dispatched to be fitted on board the vessel.

The T.V.C. of the Generator Set has been approved for a semi speed of 1200 R.P.M. in Secy's letter of 7/1/49. ~~10.2.49~~

BEARFAST:-

This emergency generator set has been satisfactorily installed on board the vessel, tried under working conditions and found in good order.

W. V. ?

The amount of Fee ... £ 7 : 4 : 0 } When applied for 20 Oct 1948
 Travelling Expenses (if any) £ 1 : 12 : 6 } When received 19

FRI. 22 APR 1949

Committee's Minute
 Assigned See F.E. wch. rpt

Weyrell
 Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

501847-T. (MADE AND PRINTED IN ENGLAND)
 (The Surveyors are requested not to write on or below the space for Committee Minutes.)