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25 OCT 1948

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# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Bel. 14.714

No. 117261

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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

Reg. Book. 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 Daimler & 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 6m 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 Navy 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 1/2

Is there a bearing between each crank Moment of inertia of flywheel 18,000 (16 m² or Kg.-cm.²) 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 Crank pin dia. 3 5/8 Crank Webs Mid. length breadth 5 Thickness parallel to axis 1 1/2

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 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. 6m Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size 6m 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 Grip Proof

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

Is an 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

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

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

Do 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, Lubrication, and Receivers Separate Tanks 8-10-47

Have Torsional Vibration characteristics if applicable been approved (state date of approval) In course of preparation Armature shaft Drawing No.

SPARE GEAR



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Foundation



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Dates of Survey while building  
During progress of work in shops - - - 1948 June 21, Sep 8, Oct 8  
During erection on board vessel - - -  
Total No. of visits - - - 3 (in shops)  
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  
Elongation 31%  
Tensile strength 43.6 tons  
Identification Marks 7.5284  
Flywheel shaft, Material  
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.)

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. Co. of the Generator Set has been approved for a Service Speed of 1200 R.P.M. in Secy's letter of 7/1/49. ~~10.2.49~~

DEAFHAST:-

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  
Travelling Expenses (if any) £ 1 : 12 : 6  
When applied for 20 Dec 1948  
When received 19

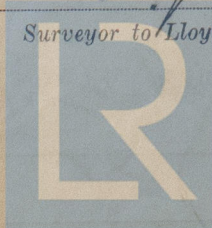
Committee's Minute

Assigned

See F.E. wch. rpt

FRI. 22 APR. 1949

Surveyor to Lloyd's Register of Shipping.



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