

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 113796

Date of writing Report 7 MAY 1946 19 When handed in at Local Office 7 MAY 1946 Port of LONDON Received at London Office MAY 1946

No. in Survey held at Reg. Book. Date, First Survey 11 Dec 1945 Last Survey 12 April 1946

Single on the Twin Triple Screw vessel Fairfield No 720 for C. P. S. Sine BEAVERLAKE Number of Visits 10

Built at Glasgow By whom built Lipton & Co. Ltd. Yard No. 120 When built 1946

Owners London Pacific Railway Port belonging to London

Oil Engines made at Bedford By whom made W. H. Allen Sons & Co. Ltd. Contract No. K2/42312 When made 1946

Generators made at " By whom made " Contract No. K2/54708 When made "

No. of Sets 3 Engine Brake Horse Power 600 Nom. Horse Power as per Rule 150 Total Capacity of Generators 400 Kilowatts.

OIL ENGINES, &c.—Type of Engines Diesel 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 800 lbs. Diameter of cylinders 290 1/2 Length of stroke 470 1/2 No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 392 1/2 Center Brg only

Revolutions per minute 300 Flywheel dia. 1500 1/2 Weight 4750 lbs. Means of ignition Compressor Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 230 1/2 Crank pin dia. 200 1/2 Crank Webs Mid. length breadth 320 1/2 Thickness parallel to axis 93 1/2 shrunk

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 16 1/2

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced

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

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

Lubricating Oil Pumps, No. and size one Rotary Gear type

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. 3 Total cubic capacity 11.2 cu ft Internal diameter 2'-0" thickness 3/8"

Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 26/30 Working pressure by Rules 350 lbs.

ELECTRIC GENERATORS:—Type Open

Pressure of supply 225 volts Full Load Current 1780 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 and do the results comply with the requirements

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

PLANS.—Are approved plans forwarded herewith for Shafting 18-5-37 Receivers 19-5-44 Separate Tanks

SPARE GEAR 8 Exhaust Valves 8 Exhaust Valve springs 3 High Air Valves 3 Relief Valves

2 Fuel Injectors, 7 Nozzles, 3 Injection pipes, 35 piston & 6 scraper rings, 3 Gudgeon pins & bushes, 1 Big end Brg, Bolts, 2 Conn. Rod Big end Assy, 6 Liner & Cyl Hd Joints, 24 Rubber Joints for Liner, 1 Main Brg & Cyl Hd Studs & nuts, 2 Main Brg Studs Nuts, 1 CW pump spindle bearing, 1 Camshaft Chain, 1 Cyl Hd Assy without Valves, 1 Gov. spring, 1 Cooling Water pump chain, 1 Set of spares for Dynamo, 2 Brush Holders & set of brushes.

The foregoing is a correct description,

W. H. ALLEN, SONS & Co. Ltd., Manufacturer.

K. H. Clarke. 21.2.46.



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Dates of Survey while building During progress of work in shops - - (1945) Dec 11, 14, 15, 21, 28. (1946) Jan 1, 15, 22 Feb 26 Apr 12
During erection on board vessel - -
Total No. of visits 10 (2 charts)

Dates of Examination of principal parts—Cylinders 14-12-45 22-1-46 15-12-45 22-12-45 23-12-45 15-1-46 1-2-46 26-2-46 Covers 15-12-45 22-12-45 23-12-45 15-1-46 1-2-46 26-2-46 Pistons 15-12-45 22-12-45 23-12-45 15-1-46 1-2-46 26-2-46 Piston rods 15-12-45 22-12-45 23-12-45 15-1-46 1-2-46 26-2-46

Connecting rods 1-1-46 Crank and Flywheel shafts 11-12-45, 8-1-46, 11-1-44 Intermediate shafts

Crank shaft Material Steel Tensile strength 56TH 225 56TH 225 56TH 225
Elongation 19-10-45 3168 11-12-45 3168 11-1-44 3168

Flywheel shaft, Material Identification Marks

Is this machinery duplicate of a previous case Identification Marks

Identification marks on Air Receivers 4) E3051 LLOYDS TEST 700lb W.P. 350lb JNB. 19-11-43 (2) E4175 LLOYDS TEST 700lb W.P. 350lb

JNB. 19-5-44. (3) E.4176. LLOYDS TEST 700lb W.P. 350lb JNB. 19-5-44 - Copies of Not Certs No C 2574

C.2573 and C1974 attached

Is this machinery duplicate of a previous case yes If so, state name of vessel Fairfield No 718 & 719

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The generator sets have been constructed under Special Survey in accordance with the requirements of the Rules, and approved Plans; the steel was made at Works approved by the Committee; the workmanship is good and on completion the sets were tested upon the bench under full and overload conditions with satisfactory results.

The torsional calculations have been approved 15-6-45
Torsographs approved

The sets have been despatched to Glasgow for fitting on board the vessel.

Forging Rpts No 42490 (SHF) & F3785, F6040 (B4m) attached

These engines have been efficiently installed in the vessel & tested under full working conditions. Please see Greenock FK of 'N' 23407 for recommendations

Charles W. Hunter
Greenock

The amount of Fee 3 SETS £ 56 : 14 : 9
Travelling Expenses (if any) £ 3 : 17 : 11
When applied for 1947 19
When received 19

Committee's Minute
Assigned
GLASGOW 12 NOV 1946
SEE ACCOMPANYING MACHINERY REPORT
RWCoomber
Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation