

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office

Surveying Report *March 14th 1953* When handed in at Local Office *MARCH 14th 53* Port of *London*

Survey held at *Bedford* Date, First Survey *Sept. 30th 1952* Last Survey *March 14th 1953*

Number of Visits *6* Tons Gross *12305* Net *4348*

By whom built *Wm Souter & Co Ltd* Yard No. *285* When built

Port belonging to *Wm Souter & Co Ltd* Contract No. *K2/15497* When made *1952*

By whom made *The Sunderland Forge & Engineering Co Ltd* Contract No. When made *1952*

Engine Brake Horse Power *222* M.N. as per Rule Total Capacity of Generators *150* kilowatts.

tended for essential services *Yes*

ENGINES, &c.—Type of Engines *Vertical Under injection diesel* 2 or 4 stroke cycle *4* Single or double acting *Single*

Working pressure in cylinders *750 lbs. psi* Diameter of cylinders *240 1/2* Length of stroke *300 1/2* No. of cylinders *5* No. of cranks *5*

Indicated pressure *85.74 psi* Firing order in cylinders *1-3-5-4-2* Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *282 1/2*

Clearance between each crank *yes* Moment of inertia of flywheel *9000 lb ft²* Revolutions per minute *600*

Shaft, dia. of journals *1200 1/2* Weight *3500 lb* Means of ignition *Compressor* Kind of fuel used *Red Gas Oil*

as per Rule *133 1/2* Crank pin dia. *150 1/2* Crank Webs *204 1/2* Thickness parallel to axis

as fitted *140 1/2* as per Rule *1470 lb ft²* as fitted

Means of lubrication *Forced* Kind of damper if fitted

Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *yes*

Water Pumps, No. *One Fresh Water per engine* Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Operating Oil Pumps, No. and size *One engine driven gear type per engine*

Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*

Blowing Air Pumps, No. *✓* Diameter *✓* Stroke *✓* Driven by *✓*

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

receiver, which can be isolated, fitted with a safety valve as per Rule *✓*

The internal surfaces of the receivers be examined *✓* What means are provided for cleaning their inner surfaces

Is a drain arrangement fitted at the lowest part of each receiver *✓*

Pressure Air Receivers, No. *✓* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*

Material *✓* Range of tensile strength *✓* Working pressure by Rules *✓*

Blowing Air Receivers, No. *One per engine* Total cubic capacity *5 cu ft each* Internal diameter *18"* thickness *5/16"*

Material *Seamless* Range of tensile strength *26/30 tons* Working pressure by Rules *30 tons*

ELECTRIC GENERATORS:—Type *Open Type Drop Proof*

Voltage of supply *110* volts. Full Load Current *1363* Amperes. Direct or Alternating Current *Direct Current*

Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown *✓*

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

All terminals accessible, clearly marked, and furnished with sockets *yes* Are they so spaced *yes*

Are the lubricating arrangements of the generators as per Rule *yes*

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

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

Are approved plans forwarded herewith for Shafting *✓* Receivers *✓* Separate Tanks *✓*

Torsional Vibration characteristics if applicable been approved *17th January 1952* Armature shaft Drawing No. *46970*

RE GEAR *As per attached List*

The foregoing is a correct description,

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

Manufacturer.

K. A. Clarke.



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Lloyd's Register Foundation

011757-011765-0218

Dates of Survey while building
 During progress of work in shops - - 1952 Sep. 30 Oct 31 Nov. 4. 7. 14. 1953 Mar. 14
 During erection on board vessel - -
 Total No. of visits 6 (in shops)

Dates of Examination of principal parts—Cylinders 4-11-52, 7-11-52 Covers 7-11-52 14-11-52 Pistons 31-10-52 Piston rods ✓

Connecting rods 31-10-52 Crank and Flywheel shafts 19-9-50 4-11-52 Intermediate shafts ✓

Crank shaft Material Steel Tensile strength A: LLOYDS EB 2137 6-6-50 D22913 19-9-50
 B LLOYDSEB 3450 8-7-52 4-11-52
 Elongation ✓ Identification Marks ✓

Flywheel shaft, Material Identification Marks ✓

Identification marks on Air Receivers (2) 81/490463 LLOYDS. J.B.T. 10-3-52 H.T. 60016 WP30016 N° H1905 * H190

Certs enclosed with Rept.

Is this machinery duplicate of a previous case No If so, state name of vessel.

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

At, Sunderland.

This machinery has been securely fitted on board the vessel - tested and found satisfactory.

John Lundgren
 11/12/53.

The amount of Fee 2 Sets £ 35 : 0 : 0 ✓ When applied for 1/4/ 19 53
 Travelling Expenses (if any) £ 1 : 5 : 0 ✓ When received 19

TUESDAY 29 DEC 1953

Committee's Minute
 Assigned See Rpt. 4e

W. Boomer & J. L. Smith
 Surveyor to Lloyd's Register of Shipping
 Lloyd's Register Foundation