

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 100868

Received at London Office

10 DEC 1934

20 MAR 1935

Date of writing Report 16 December 34 When handed in at Local Office 10 DEC 1934 Port of London

No. in Survey held at Bedford. Date, First Survey 13 September 1934 Last Survey 16 November 1934

Reg. Book. Single on the Twin Triple Quadruple Screw vessel "TRIASTER" Tons Gross Net

Built at Port Glasgow By whom built Lithgows Ltd. Yard No. 872 When built 1934

Owners _____ Port belonging to _____

Oil Engines made at Bedford. By whom made W.H. Allen Sons & Co. Ltd. Contract No. K/45397 When made 1934

Generators made at Bedford. By whom made W.H. Allen Sons & Co. Ltd. Contract No. E/45398 When made 1934

No. of Sets 3 Engine Brake Horse Power 531 Nom. Horse Power as per Rule _____ Total Capacity of Generators 360 Kilowatts.

OIL ENGINES, &c.—Type of Engines 6 S30 - Heavy oil - Solid injection 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 650 lb. sq. in. Diameter of cylinders 230 mm Length of stroke 300 mm No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 268 mm Is there a bearing between each crank Yes

Revolutions per minute 425 Flywheel dia. 1300 mm Weight 2900 lb. Means of ignition Compamim Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 128.3 mm as fitted 130 mm Crank pin dia. 130 mm Crank Webs Mid. length breadth 200 mm Mid. length thickness 60 mm Thickness parallel to axis _____ Thickness around eyehole _____

Flywheel Shaft, diameter as per Rule _____ as fitted Blank Shaft Intermediate Shafts, diameter as per Rule _____ as fitted _____ Thickness of cylinder liners 17 mm

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 No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged

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

Lubricating Oil Pumps, No. and size One each engine - 9 gallons per minute.

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

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

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Slot 55 mm dia each end

Is there a drain arrangement fitted at the lowest part of each receiver Yes

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. one Total cubic capacity 8.12 cu. ft. Internal diameter 14" thickness 1/2"

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 29/33 ton sq. in. Working pressure by Rules 850 lb. sq. in.

ELECTRIC GENERATORS:—Type Opm type - marine.

Pressure of supply 220 volts. Load 545 Amperes. Direct or Alternating Current Direct.

If alternating current system, state frequency of periods per second _____

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes are they compound wound Yes

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator _____

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

PLANS. Are approved plans forwarded herewith for Shafting 5-12-39 Receivers Christie & Tuttle Co Separate Tanks _____

SPARE GEAR See first attached hereto.

The foregoing is a correct description,
W.H. ALLEN, SONS & CO., Ltd.,
H. Geo Kimber

Manufacturer.



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Foundation
W95-0061

Dates of Survey while building { During progress of work in shops - - } 1934. Sept 13, 21, 25, 26, 27. Oct. 7, 10, 16, 19, 26. Nov. 5, 13, 16⁽²⁾
 { During erection on board vessel - - - }
 Total No. of visits 14 (In Shops)

Dates of Examination of principal parts—Cylinders 25/9/34 - 26/10/34 Covers 21/9/34 - 26/10/34 Pistons 21/9/34 - 19/10/34 Piston rods —

Connecting rods 16-10-34 Crank and Flywheel shafts 13/9/34 and 27/9/34 Intermediate shaft

Crank and Flywheel shafts, Material *S.S. Steel* Identification Mark
 Identification Marks

K/45397/A Test 961 SP Lloyd 9539 27-7-34 SAL 13-9-34	K/45397/B Test 977 SP Lloyd 9549 6-7-34 SAL 27-9-34	K/45397/C Test 986 SP Lloyd 9560 8-8-34 SAL 27-9-34
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Intermediate shafts, Material —
 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. *Workmanship good*)

These auxiliary oil engines with their direct coupled electric generators have been specially surveyed during construction and are in accordance with the approved plans and the Rules. The materials used have been made at works approved by the Committee and tested by the surveyors to this Society. Full power, overload, governing and vibration tests were witnessed in the shop & found satisfactory. They have now been dispatched to Greenock for fitting onboard and will be eligible in my opinion for the notation of Electric Light in the Register Book when fitted onboard and tested as required by the Rules.

Attached hereto: Forging certificate 4 in 11.
 List of Spare gear.

4031—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee ... £ 29 : 0 : 0 When applied for. 1 0 DEC 1934
 Travelling Expenses (if any) £ 3 : 13 : 0 When received. 16 DEC 1935

Geo. Pang
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 MAR 1935
 Assigned *See Greenock Report no 19929*