

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13334.

Received at London Office 24 JUL 1948

Date of writing Report 12th July 1948 When handed in at Local Office 22nd July 1948 Port of MANCHESTER.

No. in Survey held at Reddish. Date, First Survey 15.8.47. Last Survey 7th July, 1948.

Reg. Book. S/T. KINGSTON PERIDOT K. S. Smith St. Leonards St. Olyello Number of Visits 9  
on the Single Screw vessel. ENGINE NOS. 139368/9/70/1. Tons Gross Net

Built at By whom built Yard No. When built

Client Messrs. W. Broady & Sons Ltd., English St., Hull. Port belonging to

Oil Engines made at Reddish By whom made Messrs. Crossley Bros. Ltd. Contract No. 16952 When made 1948

Generators made at Liverpool By whom made Messrs. Campbell & Isherwood Ltd. Contract No. 39587/8 When made 1948

No. of Sets 4 Engine Brake Horse Power 4 x 17 M.N. as per Rule 4 x 4.25 Total Capacity of Generators 4 x 10 Kilowatts.

Is Set intended for essential services.

**OIL ENGINES, &c.**—Type of Engines Crossley B.W.1. type - Heavy Oil. 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 850 lbs/sq" Diameter of cylinders 5" Length of stroke 6 1/2" No. of cylinders one No. of cranks one

Mean indicated pressure 113 lbs Firing order in cylinders - Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 3/8"

Is there a bearing between each crank - Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) - Revolutions per minute 1200

Flywheel dia 24" Weight 460 lbs. Means of ignition Compression Kind of fuel used Diesel Oil.

Crank Shaft, dia. of journals as per Rule. As Approved. Crank pin dia 3 1/8" with 2" Crank Webs Mid. length breadth 4 1/2" Thickness parallel to axis -

as fitted 3 1/8" dia hole 1/8" offset. Mid. length thickness 1 13/16" Thickness round eyehole -

Flywheel Shaft, diameter as per Rule. As for Crankshaft. Intermediate Shafts, diameter as per Rule. General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) -

as fitted " as fitted -

Are means provided to prevent racing of the engine when disconnected Yes Means of lubrication Forced Kind of damper if fitted None

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes

Cooling Water Pumps, No. One 1000 Galls/hr. Is the sea suction provided with an efficient strainer which can be cleared within the vessel driven by Engine.

Lubricating Oil Pumps, No. and size One at 7/8" dia. x 1 1/2" stroke driven by engine.

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 Enclosed Ventilated - Drip Proof

Pressure of supply 110 volts. Full Load Current 91 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 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 Yes and do the results comply with the requirements Yes

If the generators are 100 kw. or over have they been built and tested under survey Tested under inspection of Society's Surveyors.

Details of driven machinery other than generator -

**PLANS.**—Are approved plans forwarded herewith for Shafting 3.6.47. Receivers - Separate Tanks -

Have Torsional Vibration characteristics if applicable been approved - Armature shaft Drawing No. -

(If not, state date of approval)

(state date of approval)

**SPARE GEAR**

The foregoing is a correct description,

CROSSLEY BROTHERS LIMITED, Manufacturer.



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Lloyd's Register Foundation

W1069-0173

Dates of Survey while building  
 During progress of work in shops - - 1947. Aug. 15. Nov. 19. 1948. June 11, 14, 16, 17, 23, 30. July 7.  
 During erection on board vessel - - -  
 Total No. of visits

Dates of Examination of principal parts—Cylinders 14.6.48/23.6.48. Covers 16/17.6.48. Piston 30.6.48/7.7.48 Piston rods -  
 Connecting rods 19.11.47/11.6.48. Crank and Flywheel shafts 10.2.48. 17.2.48. 23.6.48. Intermediate shafts  
 Crank shaft Material .40 Carbon Steel Tensile strength Lloyd's 3317 - 10.2.48. PW.  
 Identification Mark Lloyd's M.936 - 23.6.48. GJT.  
 Lloyd's 3317 - 17.2.48. PW.  
 Flywheel shaft, Material - As for Crankshaft. 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, &c.) These engines have been constructed under Special Survey in accordance with the Rules and Approved Plan.

The materials and workmanship are good.

Each of the engines coupled to its electric generator has been examined under working conditions on the test bed, 3 hours at full load followed by 1 hour at 10% overload, with satisfactory results.

(These generating sets are not intended for vessels to be classed with this Society.) No

S/T. The generator set, <sup>No.</sup> satisfactorily installed in the  
 N. Chambers  
 Hull.  
 23-12-48

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

4 at £4 each  
 The amount of Fee ... £ 16 0 : 0. When applied for 22.7.19.48. B.V.C.  
 Travelling Expenses (if any) £ 2 0 : 0. When received 19.

Committee's Minute

Assigned

