

4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 18386

of writing Report 3rd Sept. 19 51 When handed in at Local Office 3rd Sept. 19 51 Port of BRISTOL Received at London Office 26 SEP 1951

Survey held at Sharpness Date, First Survey 25th January, 49 Last Survey 29th August, 19 51

Book. Stroke on the Twin Deck Deck Deck Screw vessel "CHRISTINA DAWN" ex LCG(M) 120 Number of Visits            Tons { Gross 312.55 Net           

at London By whom built General Steam Nav. Co. Yard No.            When built 1945

ers I. P. Langford (Shipping) Ltd. Port belonging to Gloucester

Engines made at Colchester By whom made Paxman Ricardo Engine P5684 When made 1944

erators made at Alloa, Scotland By whom made The Harland Engine Co. Contract No. PTX985 When made 1944

of Sets 2 Engine Brake Horse Power 40.2 each M.N. as per Rule            Total Capacity of Generators 60 Kilowatts.

et intended for essential services Yes

L ENGINES, &c.—Type of Engines Diesel (Type 4RQ) 2 or 4 stroke cycle 4 Single or double acting single

imum pressure in cylinders 800lbs Diameter of cylinders 4 5/8" Length of stroke 5 7/8" No. of cylinders 4 No. of cranks 4

m indicated pressure            Firing order in cylinders            Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 5 1/8"

here a bearing between each crank Yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)            Revolutions per minute 1100

wheel dia            Weight            Means of ignition compression Kind of fuel used diesel oil

Shaft dia. of journals            as per Rule            Crank pin dia. 2 7/8" Crank Webs            Mid. length breadth 4 1/8" Thickness parallel to axis           

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

means provided to prevent racing of the engine when declutched Yes Means of lubrication pressure Kind of damper if fitted           

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

ding Water Pumps, No. one at each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

ricating Oil Pumps, No. and size one at each engine - gear pump

Compressors, No. none No. of stages - Diameters - Stroke - Driven by -

ving Air Pumps, No. none Diameter - Stroke - Driven by -

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

ach 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 -

here a drain arrangement fitted at the lowest part of each receiver -

h Pressure Air Receivers, No. - Cubic capacity of each - Internal diameter - thickness -

less, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules -

ring Air Receivers, No. - Total cubic capacity - Internal diameter - thickness -

less, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules -

ELECTRIC GENERATORS:—Type 2 - one at each engine, compound wound, continuous rating

ature of supply 220 volts. Full Load Current 133 Amperes. Direct or Alternating Current D.C.

ternating current system, state the periodicity - Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

nd off Yes 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

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

he generators are under 100 kw. full load rating, have the makers supplied certificates of test No and do the results comply with the requirements -

he generators are 100 kw. or over have they been built and tested under survey -

ails of driven machinery other than generator -

ANS.—Are approved plans forwarded herewith for Shafting No Receivers - Separate Tanks Yes

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

ARE GEAR -

The foregoing is a correct description,

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - Engines built under Admiralty supervision.  
 { During erection on board vessel - - Engines installed under Admiralty supervision.  
 Total No. of visits.....

Dates of Examination of principal parts—Cylinders 21.8.51 Covers 21.8.51 Pistons 21.8.51 Piston rods -  
 Connecting rods 21.8.51 Crank and Flywheel shafts 21.8.51 Intermediate shafts -  
 Crank shaft { Material - Tensile strength -  
 { Elongation - Identification Marks -  
 Flywheel shaft, Material Identification Marks  
 Identification marks on Air Receivers -

Is this machinery duplicate of a previous case. None If so, state name of vessel. None

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
 These auxiliary engines and generators were built to Admiralty specification and survey during 1941 and have not been subsequently used.  
 The machinery has now been opened out, working parts examined and found to be in good and new condition. Scantlings and sizes checked and found to be in accordance with this report.  
 A survey in accordance with Rule requirements for LMC now carried out during conversion of the vessel to Coaster Type.  
 Engines tried out under working conditions and found satisfactory.

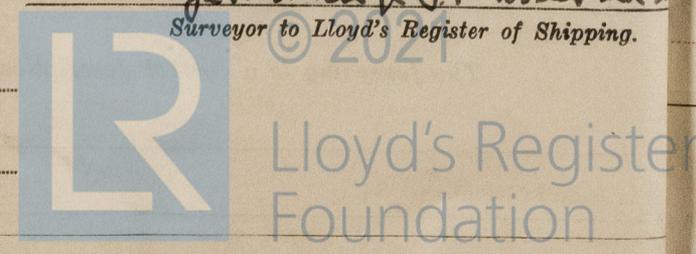
The Harland Engine Co., Ltd. compound wound continuous testing  
 D.C. 188 888  
 one at each engine - gear pump  
 one at each engine - gear pump

The amount of Fee ... £ See letter When applied for 19  
 Travelling Expenses (if any) £ : : When received 19

Committee's Minute TUES. 6 NOV 1951

Assigned See F.E. Welch opt.

W. J. A. Boster and  
 Surveyor to Lloyd's Register of Shipping.



501, 48-T. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee Minute.)