

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 102849

Received at London Office 20 APR 1936
 When handed in at Local Office 20 APR 1936 Port of London

Survey held at Bedford Date, First Survey 5th 4th 1936 Last Survey 8. 4. 1936
 Number of Visits 10

on the ^{Single} ~~Double~~ ^{Motor} ~~Triple~~ ^{Quadruple} Screw vessel "Clover"
 Tons { Gross 35.2
 Net 16.6

Builder Blundell By whom built Caledon Shipbuilding & Ttg Co Ltd Yard No. 356 When built 1936
 Port belonging to London

Engines made at Bedford By whom made W.H. Allen Sons & Co Ltd Engine No. 56250 When made 1936
 Generators made at Bedford By whom made W.H. Allen Sons & Co Ltd Generator No. 165252 When made 1936

Sets 2 Engine Brake Horse Power 37.5 EACH Nom. Horse Power as per Rule 9.6 Total Capacity of Generators 24 Kilowatts.

ENGINES, &c.—Type of Engines *Horizontal Injection* 2 or 4 stroke cycle 4 Single or double acting *Single*

Pressure in cylinders 700 Diameter of cylinders 145 7/8 Length of stroke 180 7/8 No. of cylinders 3 No. of cranks 3

Bearings, adjacent to the Crank, measured from inner edge to inner edge 154 Is there a bearing between each crank *yes*

Revolutions per minute 750 Flywheel dia. 790 7/8 Weight 980 lbs Means of ignition *Compression* Kind of fuel used *Heavy oil*

Shaft, dia. of journals as per Rule 80 7/8 as fitted 100 7/8 Crank pin dia. 90 7/8 Crank Webs Mid. length breadth 135 7/8 Thickness parallel to axis *✓*
 Mid. length thickness 36 7/8 Thickness around eye hole *✓*

1 Shaft, diameter as per Rule *Crank Shaft* Intermediate Shafts, diameter as fitted *✓* Thickness of cylinder liners 8 7/8

Any other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication *faced* *✓*

Cylinders fitted with safety valves *no* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *yes* *✓*

Water Pumps, No. *One p 250 gal/hr* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *✓*

Oil Pumps, No. and size *One gear pump 194 gal/hr low*

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

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

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes* *✓*

Internal surfaces of the receivers be examined *By removal of mountings* *yes* What means are provided for cleaning their inner surfaces *Removal of mountings*

Drain arrangement fitted at the lowest part of each receiver *yes* *✓*

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

Cap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure by Rules *✓*

Air Receivers, No. 2 Total cubic capacity 5 1/2 cubic ft Internal diameter 9 7/8 thickness 5/16 *✓*

Cap welded or riveted longitudinal joint *Stitchers* Material *steel* Range of tensile strength 26/30 Working pressure by Rules 400 lbs HP 300 lbs *✓*

GENERATORS:—Type *Enclosed Ventilated Drip-proof*

of supply 220 Volts. Load 109 Amperes. Direct or Alternating Current *Direct*

ing current system, state frequency of periods per second *✓*

Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off *yes* *✓*

Are they compound wound *yes* *✓*

er compounded 5 per cent. *yes* *✓*, if not compound wound state distance between each generator *✓*

table regulating resistance fitted in series with each shunt field *yes* *✓* Are all terminals accessible, clearly marked, and furnished with sockets *yes* *✓*

spaced or shielded that they cannot be accidentally earthed, short circuited, or touched *yes* *✓* Are the lubricating arrangements of the generator as per Rule *yes* *✓*

Are approved plans forwarded herewith for Shafting 24. 8. 33 *✓* Receivers *Standard type* Separate Tanks *none supplied*

GEAR

sets of valves for one cylinder together with springs & other fittings

fuel injector nozzles. Two sets piston rings for one cylinder.

sets studs & nuts for cylinder cover. Two gudgeon pins

main bearing bolts & nuts. Four bottom end bolts & nuts

fuel pumps

Four brush holders & two sets of brushes

Register 0

the foregoing is a correct description,
 W.H. ALLEN, SONS & CO., LD.
 Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - - }
Total No. of visits

1936 Feb 5.12.20.25 Mar 3.4.12 64 APR. 8

Dates of Examination of principal parts—Cylinders 12.2.36 Covers 5.2.36
20.2.36 20.2.36 Pistons 3.3.36 Piston rods ✓

Connecting rods 20.2.36 Crank and Flywheel shaft 4.3.36 Intermediate shaft ✓

Crank and Flywheel shaft, Material Steel Identification Mark 6352 6353 Intermediate shafts, Material Identification Marks. ✓

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 engines of these generating sets have been constructed under special survey in accordance with approved plans and Rule Requirements.

The materials made at works approved by the Society and tested in accordance with Rules. The workmanship is good. On completion the engines and generators mounted on common solibolates were run at full load and 10% overload with satisfactory results.

The governors tested and found efficient. These generating sets are suitable in my opinion for service in a clamed vessel.

Certificates herewith.

Two Engine crank shafts

Air receivers

Maker's certificates for general

These Engines & Generators have been efficiently fitted

John Houston

The amount of Fee ... £ 8 : 8 :

When applied for,

Travelling Expenses (if any) £ 1 : 5 :

When received,

Alfred Fwing
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9- JUN 1936

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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