

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 109309

Copy MS "Empire Gas".

Received at London Office

Writing Report 6 Jan 1941 When handed in at Local Office Bedford Port of London

in Survey held at Bedford Date, First Survey 23 August 1940 Last Survey 29 Nov 1940

Book. Number of Visits 7

on the Single Twin Triple Quadruple Screw vessel One of these engines fitted into Empire Gas subsequently damaged & replaced by No. K1/88717

uilt at Glasgow By whom built A. J. Inglis & Co. Yard No. 6314 When built

ners The other engine fitted into Eufora Thimney & a duplicate set made one Port belonging to

Engines made at Bedford By whom made H. Allen Sons & Co. Ltd Contract No. K1/40284 When made 1940

generators made at By whom made Contract No. When made 1940

of Sets 2 Engine Brake Horse Power 74 each Nom. Horse Power as per Rule Total Capacity of Generators 50 each Kilowatts.

ENGINES, &c.—Type of Engines. Heavy Oil 2 or 4 stroke cycle 4 Single or double acting Single

imum pressure in cylinders. 700 lb ^{sq} in. Diameter of cylinders. 230 ^{mm}/_{in} Length of stroke 300 ^{mm}/_{in} No. of cylinders 2 each No. of cranks 2 each

m of bearings, adjacent to the Crank, measured from inner edge to inner edge 282 ^{mm}/_{in} Is there a bearing between each crank Yes

olutions per minute 500 Flywheel dia. 1200 ^{mm}/_{in} Weight 3400 lb Means of ignition Compression Kind of fuel used Diesel Oil

ank Shaft, dia. of journals as per Rule 138.2 as fitted 140.2 Crank pin dia. 150 ^{mm}/_{in} Crank Webs Mid. length breadth 204 ^{mm}/_{in} Thickness parallel to axis Mid. length thickness 70 ^{mm}/_{in} Thickness around eyehole

wheel Shaft, diameter as per Rule as fitted crank shaft Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 17 ^{mm}/_{in}

a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Force

e the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

oling Water Pumps, No. one plunger type Is the sea suction provided with an efficient strainer which can be cleared within the vessel

lubricating Oil Pumps, No. and size

r Compressors, No. Two No. of stages two Diameters H.P. 3 ⁷/₈ " L.P. 1 ¹/₄ " Stroke 4 ¹/₂ Driven by main engine

avenging Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Is each 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

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

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

arting Air Receivers, No. Total cubic capacity Internal diameter thickness

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

ELECTRIC GENERATORS:—Type Open

essure of supply 220 volts Full Load Current 227 Amperes Direct or Alternating Current Direct

alternating current system, state the periodicity Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on and off Yes

nerators, are they compounded as per rule Yes is an adjustable regulating resistance fitted in series with each

nt field Yes Are all terminals accessible, clearly marked, and furnished with sockets Yes

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

he 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

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

ANS. Are approved plans forwarded herewith for Shafting 23: 3: 39 Receivers Separate Tanks

ARE GEAR 2 complete sets of valves for one cylinder, 2 nozzles, 2 sets of piston rings, 2 sets of studs and nuts for one cylinder cover, 4 bolts and nuts for main bearings, 4 bolts + nuts for bottom ends, 2 Thrust pumps, 2 Gudgeon pins + bushes, 2 bottom end bearings, assorted studs, bolts + nuts, Injector + fuel pipes, 2 sets of brush holders + brushes for dynamo etc.

29/5/41

The foregoing is a correct description.

Manufacturer.

(Signature) A. H. Salaske



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013033-013041-0249

Dates of Survey while building { During progress of work in shops - - } 1940 Aug 23 Sept 6. 9. 13 Oct 3. 7. Nov 29.
{ During erection on board vessel - - - }
{ Total No. of visits } 7

Dates of Examination of principal parts—Cylinders 9. 9. 40 3. 10. 40
23. 8. 40 Covers 7. 10. 40 Pistons 13. 9. 40 Piston rods
Connecting rods 6. 9. 40 Crank and Flywheel shaft 6. 9. 40 Intermediate shaft

Crank and Flywheel shafts, Material steel Identification Mark LLOYDS T.T. LLOYDS HA9. 6. 9. 40
Intermediate shafts, Material Identification Marks 30. 9. 6. 40 HA9. 6. 9. 40 TT39 206. 25. 6. 40

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.) The generator sets have been constructed under Special Survey in accordance with the requirements of the Rules and approved plans, the steel was made at Works approved by the Committee, the workmanship is good and on completion the machines were tested upon the bench under full & overload conditions & found satisfactory.

The Generator sets have been despatched to Glasgow for fitting on board the vessels.

This engine developed a crack in the cylinder casting and was replaced by engine No K1/89717, Lon. 109,223.
L.F.

The amount of Fee ... £ 12.12.0
Travelling Expenses (if any) £ 2.12.0
When applied for, 18/11/41
When received, 19.

(Signed) A. A. Barnett.
Surveyor to Lloyd's Register of Shipping.

FRI 31 OCT 1941

Committee's Minute

Assigned

See fls. 38 63686



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