

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1012

Received at London Office

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Date of writing Report Nov. 7th, 1940 When handed in at Local Office 10 Port of Cleveland, Ohio.

No. in Survey held at Mattoon, Illinois. Date, First Survey October 11th, Last Survey Oct. 28th, 1940. Number of Visits 4

Reg. Book. *WILLIAM C McTARNAHAN*
on the *Single* Screw vessel (National Bulk Carriers Inc. Tanker) Tons ^{Gross} _{Net}

Built at - By whom built - Yard No. - When built -

Owners - Port belonging to - Engine 20476

Oil Engines made at Mattoon, Ill. By whom made Atlas Imperial Diesel Engine Co. ~~Contract~~ No. 20477 When made 1940

Generators made at - By whom made - Contract No. - When made -

No. of Sets (1) 3 Engine Brake Horse Power 750 (Total) 2145 Nom. Horse Power as per Rule 174.5 Total Capacity of Generators - Kilowatts.

OIL ENGINES, &c.—Type of Engines (3) Diesel Auxiliaries 2 or 4 stroke cycle 4 Single or double acting (1) 6

Maximum pressure in cylinders 750 lbs. Diameter of cylinders 9" Length of stroke 10-1/2" No. of cylinders (2) 8 No. of cranks (2) 8

Span of bearings, adjacent to the crank, measured from inner edge to inner edge 10" Is there a bearing between each crank Yes

Revolutions per minute 514 Flywheel dia. 34" Weight 1500 lbs. Means of ignition Solid injection Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 6-7/8" Crank pin dia. 6-7/8" Crank Webs Mid. length breadth 10" Thickness parallel to axis -

Flywheel Shaft, diameter as fitted 6-7/8" Intermediate Shafts, diameter as fitted - Thickness of cylinder liners 11/16"

Is a governor or other arrangement fitted to prevent racing of the engine ~~Yes~~ Yes Means of lubrication Forced feed.

Are the cylinders fitted with safety valves Yes Are the exhaust pipes ~~water cooled~~ water cooled Yes

Cooling Water Pumps, No. Not furnished by Eng. Mfg. the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size (1) Rotary 11.4 G.P.M. 6/C engine - 18 C.P.M. - 8/C engine at speeds 514 RPM

Air Compressors, No. None No. of stages - Diameters - Stroke - Driven by -

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

AIR RECEIVERS:—Have they been made under Survey Not furnished by Eng. Mfg. 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 Not fitted to engines at Mattoon, Ill.

Pressure of supply - volts. Full Load Current - Amperes. Direct or Alternating Current -

If 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 -

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

shunt field - Are all terminals accessible, clearly marked, and furnished with sockets -

Are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched - Are the lubricating arrangements of the generators as per Rule -

If the generators are under 100 kw. full load rating, have the Makers supplied certificates of test - and do the results comply with the requirements -

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

PLANS. Are approved plans forwarded herewith for Shafting May 23rd, 1940. Receivers. - Separate Tanks -

SPARE GEAR furnished by Engine Mfg:— 1 Piston complete with rings and wrist pin; 1 connecting

rod bearing with bolts and nuts; 1 end main bearing, two halves; 1 intermediate main bearing, two

halves; 2 exhaust valves with springs; 1 fuel pump assembly with crosshead and connecting rod;

1 set valves for high pressure fuel pump; 1 exhaust valve with springs and fittings; 3 intake valves

with springs and fittings; 4 spray valve stems; 2 sets piston rings for one piston; 1 set hold-down

studs and nuts for one cylinder head; 2 main bearing studs and nuts; 1 cylinder head with valves,

springs and studs; and 2 high pressure fuel lines, rail to spray valve.

The foregoing is a correct description.

Atlas Imperial Diesel Eng. Co. Manufacturer.
F. J. Finley



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

Dates of Examination of principal parts—Cylinders Oct.11-28,40. Covers Oct.11-28th Pistons Oct.11-28th Piston rods -
Connecting rods Oct.11-28, 1940. Crank and Flywheel shafts Oct.11-28, 1940. Intermediate shafts -
Crank and Flywheel shafts, Material O.H. Forged Steel Identification Marks LLOYDS 1330,1331,1332, J.S.
Intermediate shafts, Material - 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.

The above mentioned engines, two (8) cylinders and one (6) cylinders, were built to this Society's Special Survey. The material and workmanship used in their construction are of good quality.

The engines were tested under full and intermediate brake loads at the Manufacturer's Works and found efficient.

Attached to this report are copies of Cleveland C-2697 and San Francisco ^{Forging} Reports 1330, 1331 and 1332.

Im.1137.—Transfer. (MADE IN ENGLAND.)

The amount of Fee ... £ \$218.75 : When applied for, 11/7/19 40
Travelling Expenses (if any) £ \$55.50 : When received, 19

S. Drummond
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See MOB. RPT. NO. 1809.

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