

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 11,898

Received at London Office

MANCHESTER. 24 JUL 1944

Writing Report 21. 7. 1944 When handed in at Local Office 24. 7. 1944 Port of MANCHESTER. 24 JUL 1944
 23.6 in Survey held at MANCHESTER. Date, First Survey 8.12.43. Last Survey 20. 7. 1944.
 Book. Number of Visits 9.

on the ^{Single} ~~Four~~ ^{Triple} ~~Quadruple~~ Screw vessel "EMPIRE DYNASTY."
 24.4.44 at SUNDERLAND. By whom built J. L. Thompson & Co. Yard No. 631 When built 1944.

Engines made at ASHTON-U-LYNE. By whom made National Gas & O.E.Co. Engine 54077 54078 54079. When made 1944.
 Generators made at BIRMINGHAM. By whom made General Electric Co.Ld. Generator 56172/1, 56172/2 & 56172/3. When made 1944.
 of Sets 3 Engine Brake Horse Power 300 each Nom. Horse Power as per Rule 86 Total Capacity of Generators 180 each Kilowatts.

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

Maximum pressure in cylinders 800 lbs/sq" Diameter of cylinders 10" Length of stroke 13" No. of cylinders 5 No. of cranks 5

of bearings, adjacent to the Crank, measured from inner edge to inner edge 12 3/8" Is there a bearing between each crank Yes.

Revolutions per minute 550 Flywheel dia. 3' 7" Weight 2600 lbs. Means of ignition Compression Kind of fuel used Diesel Oil.

as per Rule Approved. Crank pin dia. 7" Crank Webs Mid. length breadth 8 1/2" Thickness parallel to axis -
 as fitted 7.25" Mid. length thickness 2 15/16" Thickness around eyehole Solid.

as per Rule Flywheel mounted on Crankshaft Intermediate Shafts, diameter as per Rule - Thickness of cylinder liners 13/16"
 as fitted Coupling.

governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced Lubrication.

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

One incorporated with engine. Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

Lubricating Oil Pumps, No. and size One - Incorporated with engine.

Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

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

RECEIVERS:—Have they been made under Survey Yes. State No. of Report or Certificate Lloyd's No. 516.

each receiver, which can be isolated, fitted with a safety valve as per Rule Yes.

the internal surfaces of the receivers be examined Yes. What means are provided for cleaning their inner surfaces Handholes 5" x 3 1/2"

there a drain arrangement fitted at the lowest part of each receiver Yes.

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

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

Working Air Receivers, No. One Total cubic capacity 11 cft. Internal diameter 19 1/8" thickness 7/16".

unless, lap welded or riveted longitudinal joint Riveted. Material M.S. Range of tensile strength 28/32 tons Working pressure by Rules 350 lbs/sq".

ELECTRIC GENERATORS:—Type Compound Wound, Continuous rating, fan ventilated.

Pressure of supply 220 volts. Full Load Current 820 Amperes. Direct or Alternating Current D.C.

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.

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

armature field - 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

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

the generators are 100 kw. or over have they been built and tested under survey Yes. Cert. not received

ANS. Are approved plans forwarded herewith for Shafting 26.10.43. Receivers - Separate Tanks -

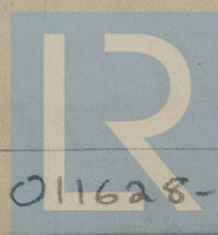
ARE GEAR AS PER RULE REQUIREMENTS.

The foregoing is a correct description.

THE NATIONAL GAS AND OIL ENGINE CO.

Manufacturer.

E. H. Russell



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011628-011635-0274

Dates of Survey while building { During progress of work in shops - - } 8.12.43, 25.2.44, 6.4.44, 5.5.44, 8.5.44, 11.5.44, 16.6.44, 30.6.44, 20.7.44. pt. 4c.
{ During erection on board vessel - - - }
Total No. of visits 8.12.43. 25.2.44. 25.2.44.
6.4.44. 5.5.44. 5.5.44.
8.5.44. 16.6.44. 16.6.44.
11.5.44. Covers 30.6.44. Pistons 16.6.44. Piston rods -

Dates of Examination of principal parts—Cylinders 30.6.43, 30.12.43, 27.3.44. Intermediate shafts -
Connecting rods LLOYD'S 7349 21.10.43 Crank and Flywheel shafts 30.6.43, 30.12.43, 27.3.44.
Crank and Flywheel shafts, Material O. H. Steel. Identification Marks M.173. J.B.G. 3.6.43.
2352. F.H. 30.12.43.
2224. F.H. 27.3.44.
Intermediate shafts, Material - Identification Marks -

Identification marks on Air Receivers LLOYD'S No.516. LLOYD'S TEST 550 lbs.
W.P. 350 lbs. 14.6.44. H.M.D.

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Caledon Shipbuilding Co. Ltd., Yard N

General Remarks (State quality of workmanship, opinions as to class, &c. THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE WORKMANSHIP AND MATERIALS ARE GOOD AND THE ENGINE, WHEN TESTED IN THE SHOP UNDER FULL LOAD CONDITIONS, GAVE SATISFACTORY RESULTS. IN MY OPINION, THIS ENGINE IS SUITABLE TO BE PLACED ON BOARD A VESSEL CLASSED WITH THIS SOCIETY FOR THE PURPOSE INTENDED.

These three 180KW Sets of Auxiliary Oil Engines have been efficiently fitted on board the *Empire Dynasty* situated on Starboard side in main Engine Room.

These sets were tested under full working conditions and found Satisfactory.

See also Rpt on Steam Turbine Machinery Rpt 42.

A. G. Smith
Newcastle-on-Tyne
3/Jan/1945

The amount of Fee ... £ 26 : 5 :
Travelling Expenses (if any) £ 2 : 5 :
When applied for, 24.7.1944
When received, 19

A. G. Smith
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 5 JAN 1945

Assigned Su F.E. machy rpt



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