

21 JUL 1946

IND. 49

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 118421

Date of writing Report 9-6-1949 When handed in at Local Office 9-5-1949 Port of London Received at London Office

No. in Survey held at London Date, First Survey 19th May Last Survey 2nd June 1949

Reg. Book. London Number of Visits 3

Single on the Twin Triple Quadruple Screw vessel

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

Owners _____ Port belonging to _____

Oil Engines made at Dagenham By whom made Russell Newbery, Ltd. Engine No. 441/8 Contract No. 22201 When made 1949

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

No. of Sets 1 Engine Brake Horse Power 66 M.N. as per Rule _____ Total Capacity of Generators 35 Kilowatts.

Is Set intended for essential services _____

OIL ENGINES, &c.—Type of Engines High Speed compression ignition 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 850 lb/sq. in. Diameter of cylinders 5 1/8" Length of stroke 7 1/4" No. of cylinders 4 No. of cranks 4

Mean indicated pressure 105 Firing order in cylinders 1,3,4,2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 3/8"

Is there a bearing between each crank Yes Moment of inertia of flywheel ($16 \text{ m}^2 \text{ or } \text{Kg. cm.}^2$) 66564 Revolutions per minute 1000

Flywheel dia. 28" Weight 535 lbs. Means of ignition Compression Kind of fuel used Pool diesel oil

Crank Shaft, dia. of journals as per Rule. as approved. 3 3/4" Crank pin dia. 3 5/8" Crank Webs Mid. length breadth 4 5/8" shrunk Thickness parallel to axis Solid Mid. length thickness 1.55" Thickness round eyehole _____

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule General armature, moment of inertia ($16 \text{ m}^2 \text{ or } \text{Kg. cm.}^2$) _____

Are means provided to prevent racing of the engine when declutched Yes Means of lubrication Forced Kind of damper if fitted None

Are the cylinders fitted with safety valves No Are the exhaust pipes and openers manifold water cooled or lagged with non-conducting material Yes

Cooling Water Pumps, No. 1 - Centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____

Lubricating Oil Pumps, No. and size 1 gear type operating at 3/4 engine speed, capacity 3.6 gals/min

Air Compressors, No. _____ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

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

AIR RECEIVERS:—Have they been made under Survey _____ 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 _____

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 as per Rule when full 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 _____

Details of driven machinery other than generator _____

PLANS.—Are approved plans forwarded herewith for Shafting _____ Receivers _____ Separate Tanks _____
(If not, state date of approval)

Have Torsional Vibration characteristics if applicable been approved _____ Armature shaft Drawing No. _____
(state date of approval)

SPARE GEAR Makers supply covers Rule Requirements.

The foregoing is a correct description,

T.J. Dufrenoy

Manufacturer.

FOR & ON BEHALF OF RUSSELL NEWBERY & CO. LTD.



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013008-013017-0096

Dates of Survey while building
 During progress of work in shops - - 19th - 26th May and 2nd June 1949.
 During erection on board vessel - - -
 Total No. of visits 3

Dates of Examination of principal parts—Cylinders 19-5-49 Covers 19-5-49 Pistons 19-5-49 Piston rods 19-5-49

Connecting rods 19-5-49 Crank and Flywheel shafts 19-5-49 Intermediate shafts

Crank shaft Material EN8 Tensile strength 40 tons
 Elongation 22% Identification Marks 8/28 4-4-49 LLOYDS 2R 1948 6053 E.A.

Flywheel shaft, 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.)

This engine has been built under Special Survey of tested materials and the workmanship is good. The engine has been surveyed during erection and under full load working conditions. Satisfactory governor trials have been carried out.
 The engine is directly coupled to an electric generator made by Sunderland Forge, N° 41469 of capacity 35 K.W.
 The set is supplied to the order of Messrs Sunderland Forge and intended for their Order N° 28600/1 dated 25-2-48.

The amount of Fee ... £ 4 : 0 : 0 When applied for 16 June 1949
 Travelling Expenses (if any) £ : : When received 19

Committee's Minute
 Assigned No Action

B. P. Zelden.
 Surveyor to Lloyd's Register of Shipping.
 Lloyd's Register Foundation

501, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
 (The Surveyors are requested not to write on or below the space for Committee Minute.)