

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 1028

22 DEC 1952

10 JUN 1953

Date of writing Report 19 When handed in at Local Office 19 Port of NOTTINGHAM.
No. in Survey held at Lincoln. Date, First Survey Last Survey 19
Reg. Book. Number of Visits
Single on the Twin Triple Quadruple Screw vessel "Blandford"
Built at Belfast. By whom built Messrs. Harland & Wolff Ltd., Yard No. 1454 When built 1953
Owners Blandford Shipping Co Ltd Port belonging to London
C 3856/13/510112. B.62588.
Oil Engines made at Lincoln. By whom made Ruston & Hornsby Ltd., Engine No. 332054. When made 1952
Generators made at Belfast. By whom made Messrs. Harland & Wolff Ltd., Generator No. When made 1952.
No. of Sets 1 B.H.P. of each Set 136 M.N. as per Rule 34 Capacity of each Generator 75 Kilowatts.
Is Set intended for essential services Yes

OIL ENGINES, &c.—Type of Engines 4VCBZ. Engine No. 332054. 2 or 4 stroke cycle 4 Single or double acting S.A.
Maximum pressure in cylinders 730 \pm 3% Diameter of cylinders 8" Length of stroke 10.3/4" No. of cylinders 4 No. of cranks 4
Mean indicated pressure 104 lb. Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 9.3/16"
Is there a bearing between each crank Yes ~~GD2 = 16mm x 16mm x 16mm~~ flywheel ~~16mm x 16mm x 16mm~~ 9.15 tons ft.² Revolutions per minute 600
Flywheel dia. 3'-9" Weight 21 cwt. Means of ignition Compression. Kind of fuel used Diesel Oil.
Crank Shaft, Solid forged dia. of journals as per Rule App'd. 6" Crank pin dia. 4.3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis
Semi-built as fitted 6" Mid. length thickness 2 1/2" shrunk
All-built as fitted 6" Thickness round eyehole

Flywheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m² or Kg.-cm.²)
as fitted C./shaft.
Are means provided to prevent racing of the engine Yes Means of lubrication Forced Kind of damper if fitted
Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material driven.
Cooling Water Pumps, No. and how driven one engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Lubricating Oil Pumps, No. and size One 480 gals./hour. Engine driven.

Air Compressors, No. No. of stages Diameters Stroke Driven by
Scavenging Air Pumps or Blowers, No. How driven

AIR RECEIVERS:—Have they been made under Survey State No. of Report or Certificate
(other than main engines)
State full details of safety devices

Can the internal surfaces of the receivers be examined and cleaned
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
Starting Air Receivers, No. Total cubic capacity Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure

ELECTRIC GENERATORS:—Type Open type, Compound wound, Cont. rating No. 10609.

Pressure of supply 110 volts. Full Load Current 682 Amperes. Direct or Alternating Current D.C.

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

If the 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

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 Standard. 2.4.40. Receivers Separate Tanks
(If not, state date of approval)

Have Torsional Vibration characteristics if applicable been approved 5.4.51. Armature shaft Drawing No.
(State date of approval and name of previous duplicate case, if any)

Has the spare gear required by the Rules been supplied To Rule Requirements.

The foregoing is a correct description,

Ruston & Hornsby, Limited. Manufacturer.

Y. Murchall



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Dates of Survey while building { During progress of work in shops - - 29.10.52. 12.11.52. During erection on board vessel - - - - - 2 Total No. of visits - - - - - 2

Dates of Examination of principal parts—Cylinders 29.10.52. Covers as cyls. Pistons as cyls. Piston rods -

Connecting rods as cyls. Crank and Flywheel shafts 18.2.52. & 29.10.52. Intermediate shafts -

Crank shaft { Material Tensile strength Identification Marks LL.7432. RE.8795. J.B.T. Elongation

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case. Yes If so, state name of vessel Standard Type.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under Special Survey, in accordance with the Approved Plans and Regulations of the Society, material and workmanship being good.

On completion, the generating set was tested in the Shops under working conditions and the governing tested with satisfactory results.

The set has been forwarded to Belfast for installation on board the vessel.

This machinery has now been installed in the vessel, tried under working conditions & found satisfactory

The amount of Fee ... £ 13 : 0 : 0. When applied for 17/12/1952.

Travelling Expenses (if any) £ : : When received 19

Committee's Minute GLASGOW 9 JUN 1953

Assigned SEE ACCOMPANYING MACHINERY REPORT

Surveyor to Lloyd's Register of Shipping.



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