

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 11,806

Received at London Office - 3 SEP 1936

Date of writing Report 19... When handed in at Local Office 2nd Sept 1936 Port of BELFAST
No. in Survey held at Belfast Date, First Survey Included in F. C. Achy. rpt. Last Survey 31 Aug. 1936
Reg. Book. Number of Visits

37780 on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel DUNVEGAN CASTLE Tons {Gross Net

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 960 When built 1936

Owners Union Castle Mail S.S. Co. Ltd. Port belonging to London

Oil Engines made at Belfast By whom made Harland & Wolff Ltd. Contract No. 960 When made 1936

Generators made at Belfast By whom made Harland & Wolff Ltd. Contract No. 960 When made 1936

No. of Sets 4 Engine Brake Horse Power ea. 525 Nom. Horse Power as per Rule 600 Total Capacity of Generators 1400 Kilowatts.

OIL ENGINES, &c. Type of Engines Harland & Wolff - B.M. Turbine piston ^{Arlessing} 2 or 4 stroke cycle 2 Single or double acting ^{single}

Maximum pressure in cylinders 700 lbs. Diameter of cylinders 280 mm. Length of stroke 500 mm. No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 358 mm. Is there a bearing between each crank Yes

Revolutions per minute 330 Flywheel dia. Weight Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule ^{Approved} as fitted 220 baed 62 mm. Crank pin dia. 200 baed 62 mm. Crank Webs Mid. length breadth 270 mm. Solid forged Thickness parallel to axis. Mid. length thickness 108 mm. Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as fitted Thickness of cylinder liners 22 mm.

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

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

Cooling Water Pumps, No. See main motors Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size One each figure of 9 cubic metres/hr.

Air Compressors, No. See main motors No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. One ea. figure 73 M³/min Capacity at 330 revs/min. delivering at 1.2 atmos. absol. Driven by geared from crankshaft

AIR RECEIVERS: - Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Open ends.

Is 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

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

Starting Air Receivers, No. One Total cubic capacity 180 litres Internal diameter 14" thickness 1/2"

Seamless, lap welded or riveted longitudinal joint Yes Material Steel Range of tensile strength 24/28 tons Working pressure by Rules 828 lbs.

ELECTRIC GENERATORS: Type Harlandic Marine Type

Pressure of supply 220 volts. Load ea. 1580 Amperes. Direct or Alternating Current direct

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding rating Yes are they compound wound Yes

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator

is an adjustable regulating resistance fitted in series with each shunt field Yes 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

PLANS. Are approved plans forwarded herewith for Shafting 17.5.35 Receivers See report of main engine Separate Tanks

SPARE GEAR See attached list:-

The foregoing is a correct description. For HARLAND AND WOLFF, LIMITED.

W. Marshall
Assistant Secretary

Manufacturers.



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WB83-0035.2

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 29.4.36 to 5.6.36 Covers _____ Pistons 22.4.36 to 25.5.36 Piston rods ✓

Connecting rods 29.4.36 : 6.5.36 : 12.5.36 : 29.5.36 Crank and Flywheel shaft 6.4.36 9.4.36 17.4.36 11.5.36 Intermediate shaft

Crank and Flywheel shafts, Material *S.M. Steel* Identification Mark *613 . 212 . 143 . 451*

Intermediate shafts, Material _____ Identification Marks _____

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *"Dunnotan Castle"*

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been constructed under special survey. The materials and workmanship are good. They have been tried out with their generators under full load. The speed governing has been tried & found satisfactory.

1m, 9, 28—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee Minute.)

The amount of Fee £	✓	When applied for,
		19.....
Travelling Expenses (if any) £	✓	When received,
		19.....

Charles J. Hunter & R. Lee Anneson
Surveyors to Lloyd's Register of Shipping.

Committee's Minute

TUE. 8 SEP 1936

Assigned

See Bel 36 Rpt. 11806



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