

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 12128

APR 12 1938

Received at London Office

Date of writing Report 19 When handed in at Local Office 8/4/19 Port of *Belfast*  
*Please see machinery report.*  
 No. in Survey held at *Belfast* Date, First Survey Last Survey 19  
 Reg. Book. Number of Visits

12182 on the *Single* *Twin* *Triple* *Quadruple* Screw vessel *CAPETOWN CASTLE* Tons { Gross 26850 Net 16500

Built at *Belfast* By whom built *Harland & Wolff Ltd* Yard No. 986 When built 1938  
 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. 986 When made 1938  
 Generators made at *Belfast* By whom made *Harland & Wolff Ltd* Contract No. 986 When made 1938

No. of Sets 5 Engine Brake Horse Power Nom. Horse Power as per Rule 990 Total Capacity of Generators 3500 Kilowatts.

OIL ENGINES, &c.—Type of Engines *Harland B.W. Diesel injection* 2 or 4 stroke cycle *Two* Single or double acting *Single*

Maximum pressure in cylinders 700 lb Diameter of cylinders 350 mm Length of stroke 620 mm No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 462 mm Is there a bearing between each crank *Yes*

Revolutions per minute 260 Flywheel dia. 1900 mm Weight 4900 kg Means of ignition *Compression* Kind of fuel used *Diesel Oil*

Crank Shaft, dia. of journals as per Rule 270 mm Crank pin dia. 240 mm Crank Webs Mid. length breadth 320 mm Thickness parallel to axis as fitted 134 mm Thickness around eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 26 mm as fitted

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. *Two* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*

Lubricating Oil Pumps, No. and size *Two 100 tons/hr.*

Air Compressors, No. *13 blowers* No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. *One each engine* Capacity *111 m<sup>3</sup>/min at 10.10 rpm* Stroke *1.2 kg/cm<sup>2</sup> pressure* Driven by *Engine*

AIR RECEIVERS:—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. *See main engine report* 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 *Compound wound. Multi-polar open type*

Pressure of supply 220 volts Load 3150 Amperes. Direct or Alternating Current *DC*

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 30-10-36 Receivers Separate Tanks *See main eng. rpt.*  
 (If not, state date of approval)

SPARE GEAR

*See attachment list*

The foregoing is a correct description  
 FOR HARLAND AND WOLFF, LIMITED.  
*A. J. Marshall* Manufacturer.  
 Secretary.



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 29/11/36 to 7/10/37 Covers 29/11/36 to 7/10/37 Pistons 12/3/37 to 5/5/37 Piston rods

Connecting rods 22/2/37 to 29/3/37 Crank and Flywheel shafts 4/6/37 to 31/8/37 Intermediate shaft

Crank and Flywheel shafts, Material *Steel* Identification Mark *Lloyds N° 259*

Intermediate shafts, Material Identification Marks

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *STIRLING CASTLE*

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

*These engines have been constructed under special survey. The workmanship & materials are good. They have been efficiently installed on board the vessel & tried out under full working conditions with satisfactory results.*

*The main generators were constructed under special survey and the electrical installation tested & tried out with satisfactory results.*

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

The amount of Fee ... £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

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

Committee's Minute

Assigned

FRI. 22 APR 1938

*See Bel J.E. 12128*



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Lloyd's Register Foundation

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22/82

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