

27 SEP 1930

B2 10.468

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 50658

Received at London Office 16 JUL 1930

pt. 4c.

Date of writing Report 11th July, 1930 When handed in at Local Office 11th July, 1930 Port of GLASGOW.

No. in Survey held at Glasgow Date, First Survey 9.12.29 Last Survey 9th July, 1930.  
Reg. Book. Number of Visits 16

86460 on the Single Screw vessel "SILVERSANDAL" Tons } Gross  
                  Twin }  
                  Triple }  
                  Quadruple }

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 885. When built 1930

Owners Silver Line Ltd. Port belonging to LONDON.

Oil Engines made at Glasgow By whom made Harland & Wolff Ltd Contract No. 885 When made 1930

Generators made at Funderland By whom made Funderland Forge & Eng. Co Contract No. 885 When made 1930

No. of Sets 4 Engine Brake Horse Power 151 each Nom. Horse Power as per Rule 172 each Total Capacity of Generators 400 Kilowatts.

IL ENGINES, &c.—Type of Engines Diesel, Vertical Reciprocating 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 lb./in<sup>2</sup> Diameter of cylinders 230 mm Length of stroke 380 mm No. of cylinders 6 each No. of cranks 6 each

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 302 mm Is there a bearing between each crank Yes

Revolutions per minute 300 Flywheel dia. 1225 mm Weight 1.08 tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 132 mm as fitted 140 mm Crank pin dia. 140 mm Crank Webs Mid. length breadth 335 mm Thickness parallel to axis 2 solid  
as fitted 140 mm Mid. length thickness 78 mm Thickness around eyehole Forged.

Flywheel Shaft, diameter as per Rule 132 mm as fitted 140 mm Intermediate Shafts, diameter as per Rule ✓ as fitted ✓ Thickness of cylinder liners 18 to 14 mm

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

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. Ship's system Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Lubricating Oil Pumps, No. and size One off each engine — each 2 tons/hr.

Air Compressors, No. None No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Scavenging Air Pumps, No. None Diameter ✓ Stroke ✓ Driven by ✓

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule  fusible plug; safety valve on pipe line.

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

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

High Pressure Air Receivers, No. None 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 150 litres Internal diameter 295 mm thickness .71 in.

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 432 ton/in<sup>2</sup> Working pressure by Rules 1680 lb./in<sup>2</sup>

ELECTRIC GENERATORS:—Type Open type

Pressure of supply 220 volts. Load 455 (each) 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 12th Oct. 1929 Receivers No Separate Tanks None.

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The foregoing is a correct description,  
For HARLAND & WOLFF, LTD.

*[Signature]* Manufacturer.

MANAGER FINNIESTON WORKS,



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Lloyd's Register  
Foundation

002477-002484-0070

Dates of Survey while building: During progress of work in shops - - (19 29 Dec 9. 10. 20 (19 30) Jan 21 Mar 5. 12. 17. 19. 24. 28 May 8. 9 June 3. 19 July 3. 9)  
 During erection on board vessel - - -  
 Total No. of visits

Dates of Examination of principal parts—Cylinders 19-6-30 Covers 19-6-30 Pistons 3-6-30 Piston rods 3-6-30  
 Connecting rods 3-6-30 Crank and Flywheel shafts { 12-3-30, 24-3-30 } Intermediate shaft None.

Crank and Flywheel shaft, Material Steel Identification Mark 2021, 2953, 3011, 3095. Intermediate shafts, Material Identification Marks

Is this machinery duplicate of a previous case? Yes. If so, state name of vessel M.V. "Sivortak."

General Remarks (State quality of workmanship, opinions as to class, &c.) These four 6-cylinder Auxiliary Dies Engines have been built under special survey in accordance with this Society's Rules. The material & workmanship are good. They have been tried on the test bed under full power load with satisfactory results. The Engines & their generators have been forwarded to Belfast to be fitted in the vessel.

These engines have been efficiently fastened on seats in the motor room of the vessel & tried out under full working conditions with satisfactory results.

R. Lee Amers  
 Belfast.

A. L.  
 12/7/30.

Im. 7.20—Transfer. (The Surveymen are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 17 : 4 : 15 JUL 1930  
 Travelling Expenses (if any) £ — : — : 17 Aug 1930  
 When applied for, 15 JUL 1930  
 When received, 17 Aug 1930  
 J. D. Boyle  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 JUL 1930  
 Assigned Defered.

