

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 12451

Date of writing Report 19 When handed in at Local Office 8. 9. 1937 Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 4. 8. 1937 Last Survey 19  
 Reg. Book. Number of Visits  
 ✓ 16447 on the Single Screw vessel "WELLINGTON STAR"  
 ✓ Triple  
 Quadruple  
 Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 1016 When built 1939.  
 Owners Blue Star Line, Ltd. Port belonging to Belfast  
 Oil Engines made at Belfast By whom made Harland & Wolff, Ltd. Contract No. 1016 When made 1939  
 and dia Generators made at Milton, Birmingham. By whom made General Electric Co. Ltd. Contract No. 97859/701 When made 1939  
 No. of Sets 3 Engine Brake Horse Power 1440 Nom. Horse Power as per Rule 1417 Total Capacity of Generators 990 Kilowatts.

IL ENGINES, &c.—Type of Engines Harland & Wolff—B.M. Inlet injection 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 500 Diameter of cylinders 330 mm. Length of stroke 580 mm. No. of cylinders 6 No. of cranks 6  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 400 mm. Is there a bearing between each crank Yes  
 Revolutions per minute 300 Flywheel dia. 1900 mm. Weight 4000 Kgs. Means of ignition Compression Kind of fuel used diesel oil  
 as per Rule approved  
 Crank Shaft, dia. of journals 280 mm. Crank pin dia. 220 mm. Crank Webs Mid. length breadth mean 292 mm. Thickness parallel to axis Solid  
 as fitted 280 mm. Mid. length thickness 115 mm. Thickness around eye hole fanged  
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 24 mm.  
 as fitted 270 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. see report on Main Engines Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
 Lubricating Oil Pumps, No. and size Three 8.4 cub. metres per hour at 300 r.p.m.  
 Air Compressors, No. Two No. of stages 2 Diameters 400 - 350 Stroke 260 Driven by Electric motor  
 scavenging Air Pumps, No. Diameter Stroke Driven by

R RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes  
 Are 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. Two Total cubic capacity 180 litres Internal diameter 14" thickness 1/2"  
 Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28/32 Working pressure by Rules 966 lbs/sq. in.

ELECTRIC GENERATORS:—Type Compound-wound  
 Pressure of supply 220 volts. Load 4500 total Amperes. Direct or Alternating Current direct  
 Is an 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  
 Do the generators, do they comply with the requirements regarding rating Yes are they compound wound Yes  
 Do they over compound 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  
 Are approved plans forwarded herewith for Shafting 6. 4. 38 Receivers. Separate Tanks 16. 3. 39.  
 (If not, state date of approval)

ARE GEAR  
 In accordance with the rules - see separate list.



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 2.3.39 to 21.4.39 Covers and Pistons 24.2.39 to 25.4.39 Piston rods ✓

Connecting rods 9.3.39 3.4.39 7.4.39 Crank and Flywheel shaft 2.3.39 23.39 21.3.39 Intermediate shaft ✓

Crank and Flywheel shafts, Material S. M. Steel Identification Mark LLOYD'S 280

Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel "Sydney Star" ✓

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

These engines have been constructed under special survey. The materials and workmanship are good. They have been efficiently installed on board the vessel and tried out under working conditions with satisfactory results. The main generators were constructed under survey and the electrical installation tried out satisfactorily.

The amount of Fee ... £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Ree James & Co.

Surveyors to Lloyd's Register of Shipping.

Committee's Minute

19 SEP 1939

Assigned

See Bel. J.C. Rpt. 12451



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