

10 MAR 1930

Bel 10,330

No. 49365

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

Received at London Office 19 JUN 1929

Date of writing Report 19 When handed in at Local Office 18.6.29 Port of Glasgow

No. in Survey held at Glasgow Reg. Book. Date, First Survey 7.6.28 Last Survey 6.6.1929 Number of Visits 19

37059 on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel Ulster Prince

Built at Belfast By whom built Harland & Wolff Ltd Yard No. 697 When built 1930

Owners Belfast S. S. Co. Ltd. Port belonging to Belfast

Oil Engines made at Glasgow By whom made Harland & Wolff Ltd Contract No. 697 When made 1930

Generators made at Belfast By whom made " Contract No. 697 When made 1929

No. of Sets 3 Engine Brake Horse Power 165 each Nom. Horse Power as per Rule 47 each Total Capacity of Generators 330 Kilowatts.

OIL ENGINES, &c.—Type of Engines Diesel 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 500 lbs 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 Mid. length thickness 78 mm Thickness parallel to axis 78 mm Thickness around eye hole solid 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 mm to 14 mm

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced and 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. off main system Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size one — two tons per hour

Air Compressors, No. main supply No. of stages — Diameters — Stroke — Driven by —

Scavenging Air Pumps, No. — Diameter — Stroke — Driven by —

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule on compressor. Fusable plugs on receivers.

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. 2 Total cubic capacity 300 litres Internal diameter 295 mm thickness 15.8 mm

Seamless, lap welded or riveted longitudinal joint seamless Material steel Range of tensile strength 28-32 tons Working pressure by Rules 1480 lbs per sq. in.

ELECTRIC GENERATORS:—Type open type level compound direct current

Pressure of supply 220 volts Load 500 (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. no — level, 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 ELO Rpt. 48919 Receivers Harland & Wolff Standard — to Rules Separate Tanks none

SPARE GEAR list forwarded with ELO Rpt. 48919 (MV Ulster Monarch) includes spare gear for these sets also

The foregoing is a correct description,

For HARLAND & WOLFF, LTD.

S. C. Green,

Manufacturer.

MANAGER FINNIESTON WORKS

per ab.



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Foundation

W132-0161

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

1929 June 7 Aug 20-28 Oct 10 Nov 28 Jan 31 Feb 11-22 Mar 25 Apr 9 11 18 24 29 30 June 3 4 5 6

Dates of Examination of principal parts—Cylinders 22-2-29 25-3-29 Covers 11-4-29 24-4-29 Pistons 7-6-28 Piston rods 7-6-28

Connecting rods 7-6-28 + 11-7-28 Crank and Flywheel shaft 28-11-28 - 31-1-29 11-2-29 Intermediate shaft

Crank and Flywheel shaft, Material steel Identification Mark LLOYDS No 812 745 886 328 Intermediate shafts, Material Identification Marks

Is this machinery duplicate of a previous case? If so, state name of vessel M/V "Ulster Monarch"

General Remarks (State quality of workmanship, opinions as to class, &c.) These three auxiliary sets have been

built under special survey in accordance with the Society's Rules

The material and workmanship are good. They have been tried under

full power on the test bed, driving their own generators with

satisfactory results.

The engines and generators have been forwarded to Belfast to be

fitted in the vessel

These auxiliary engines have been efficiently installed and fastened in the auxiliary motor room

of the vessel and tried out under working conditions with satisfactory results.

R. Lee Amear

Belfast.

18/6/29.

When applied for, 18 JUN 1929

The amount of Fee ... £ 14 : 2

When received, 28th Aug 1929. advised by London

Travelling Expenses (if any) £

Committee's Minute GLASGOW 18 JUN 1929

Assigned Defered

See Bel. J.E.

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