

REPORT ON OIL ENGINE ~~ELECTRIC~~ GENERATOR SETS.

No. 93219

Nuc 31572 Bel. 10.102.

Date of writing Report 5 NOV 1928 When handed in at Local Office 5 NOV 1928 Port of London
 No. in Survey held at Sandiacre Date, First Survey 19 DECEMBER 1927 Last Survey 13 SEPT 1928
 Reg. Book. 90404 on the Single Screw vessel Jw. Lc. Highland Chieftan Number of Visits 8 (Full)
 Built at Belfast By whom built Harland & Wolff Ltd Yard No. 806 When built 1928
 Owners H. W. Nelson Ltd Port belonging to Belfast
 Oil Engines made at Sandiacre By whom made Premier Gas Eng Co Ltd Contract No. 587 When made 1928
 Generators made at Dartford By whom made Jr. E. Hall Ltd Contract No. 1928
 No. of Sets Two Engine Brake Horse Power 308 Nom. Horse Power as per Rule 308 Total Capacity of Generators ✓ Kilowatts.

OIL ENGINES, &c.—Type of Engines Diesel Horizontal 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 600 lb Diameter of cylinders 16 1/2" Length of stroke 24" No. of cylinders 4 No. of cranks 2
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 30" Is there a bearing between each crank Yes
 Revolutions per minute 90/180 Flywheel dia. 6' 6" Weight 5-12 Means of ignition Compression Kind of fuel used A.A. Fuel Oil
 Crank Shaft, dia. of journals as per Rule Crank pin dia. 11" Crank Webs 13" Thickness parallel to axis Solid
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness around eyehole 1 1/2" top end
 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 Yes
 Cooling Water Pumps, No. From Main Engines Is the sea suction provided with an efficient strainer which can be cleared within the vessel Fresh Water
 Lubricating Oil Pumps, No. and size One attached to engine 13.3 gpm/min.
 Air Compressors, No. Airless injection 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 Yes
 Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Manhole door
 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 28 cu ft Internal diameter 2' 6" thickness 1 3/32"
 Seamless, lap welded or riveted longitudinal joint DP lap Material M.S. Range of tensile strength ✓ Working pressure by Rules ✓

ELECTRIC GENERATORS:—Type ✓
 Pressure of supply volts Load Amperes Direct or Alternating Current ✓
 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 ✓
 Generators, do they comply with the requirements regarding rating ✓ are they compound wound ✓
 are they over compounded 5 per cent. ✓, if not compound wound state distance between each generator ✓
 is an adjustable regulating resistance fitted in series with each shunt field ✓ Are all terminals accessible, clearly marked, and furnished with sockets ✓
 are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched ✓ Are the lubricating arrangements of the generators as per Rule ✓

PLANS. Are approved plans forwarded herewith for Shafting ✓ Receivers ✓
 (If ✓ date of approval)

SPARE GEAR

- 1 Piston with 7 rings & internal details
- 1 Gudgeon pin
- 1 Cylinder with studs & joints
- 6 Joints for cylinder
- 12 Bush end studs & nuts
- 2 Admission valves casing & springs
- 4 Exhaust " " " "
- 1 Compressed air starter valve casing & piston
- 8 Sprayer spindles & nozzles
- 2 Sprayers complete but without trainers
- 4 Fuel pump plungers & spring guides
- 4 Fuel pump suction & delivery valves
- 1 Fuel pump body complete with control valve and barrel but without other valves & plungers
- 1 Set governor springs
- 2 Sprayer pipes (handed)
- 2 Exhaust valve spring spindles

- 5 P.R. rings for admission valve casing
- 1 Big end bearing for forked end con. rod two halves
- 1 Big end bearing for solid end con. rod one half
- 1 small end bearing
- 8 large end bolts & nuts
- 8 small end bolts & nuts
- 1 crankshaft drilled & plugged complete No.
- 1 Main bearing & 4 studs & gear side
- 1 " " " " flywheel side
- 1 " " " " (intermediate)
- 2 cuts anti-friction metal
- 30 Brass liners various thicknesses
- 2 flanges or unions for air piping
- 1 standard straight length compressed air piping
- 4 control valve spindles
- 1 " " guide
- 54 S.E.A. rings
- Sufficient springs to make up a complete set with those already specified.

The foregoing is a correct description.

FOR THE PREMIER GAS ENGINE CO, LTD,

H. Gibbons
 DIRECTOR.

Manufacturer.

Lloyd's Register
 Foundation

003038-003045-0234

Dates of Survey while building { During progress of work in shops - - 1927 Dec. 19 1928 FEB 29 MAR 13 APR 16 MAY 9 25-26 JUNE 21 JULY 2-19-30 AUG 15-30 SEP 7-13
During erection on board vessel - - -
Total No. of visits 8 (Full)

Dates of Examination of principal parts—Cylinders 101302-9/6/21, 7/25/6/28 101303-25/6/28, 25/6/28 Covers 101302 141 16.4.29 101303 372 16.4.29 Pistons Piston rods ✓
Connecting rods 16-4-28 Crank and Flywheel shaft 101302 141 RWF 9/3/28 101303 272 RWF 5/4/28 Intermediate shaft ✓
Crank and Flywheel shaft, Material Siemens Steel Identification Mark 101302 141 RWF 9/3/28 101303 272 RWF 5/4/28 Intermediate shafts, Material Identification Marks ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel "Highland Monarch"

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

These engines have been built under special survey and in accordance with the Rules & approved plans. The materials & workmanship are good.

The engines have been satisfactorily tested under full load & 10% overload, they have been dispatched to Belfast to be fitted on board the vessel.

C.H.H.

These engines have been efficiently fitted and fastened on the upper deck of the vessel. They have been tried out under full working conditions, driving the refrigerating compressors, with satisfactory results.

R. Lee Amers
Belfast.

The amount of Fee £ 25-4-0

When applied for,

19 1928

Travelling Expenses (if any) £ 22-9-7

When received,

16 Nov 28

See London letter

Charles H. Hunter

Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 25 JAN 1928

Assigned



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