

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 59572

Received at London Office

APR 13 1938

Date of writing Report 19 5. 4. 38 When handed in at Local Office Port of Glasgow  
Date, First Survey 30. 3. 1938 Last Survey 30. 3. 1938  
Number of Visits 1

No. in Survey held at Glasgow  
Reg. Book. 152  
on the Single Twin Triple Quadruple Screw vessel "KOOLAMA."  
Tons { Gross 4026  
Net 2213

Built at Glasgow By whom built Harland & Wolff Ltd. Yard No. 1003 When built 1938  
Owners GOVERNMENT OF WESTERN AUSTRALIA Port belonging to FREMANTLE

Oil Engines made at Glasgow By whom made Harland & Wolff Ltd. Contract No. 1003 When made 1938  
Generators made at Belfast By whom made do Contract No. 656 When made 1938

No. of Sets 3 Engine Brake Horse Power 259 <sup>each</sup> Nom. Horse Power as per Rule 74 <sup>each</sup> Total Capacity of Generators 526.5 Kilowatts.

OIL ENGINES, &c. Type of Engines Heavy oil. Solid injection 2 or 4 stroke cycle 2 Single or double acting S.A.  
Maximum pressure in cylinders 800 lb/sq. in. Diameter of cylinders 220 mm. Length of stroke 370 mm. No. of cylinders 5 No. of cranks 5  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 304 mm. Is there a bearing between each crank yes

Revolutions per minute 360 Flywheel dia. 1300 mm. Weight 1 3/4 tons Means of ignition Compression Kind of fuel used Diesel oil.  
Crank Shaft, dia. of journals as per Rule 139.4 mm. Crank pin dia. 180 mm. Crank Webs Mid. length breadth 260 mm. Thickness parallel to axis Solid  
as fitted 180 mm. Mid. length thickness 90 mm. shrunk Thickness around eyehole Forged.

Flywheel Shaft, diameter as per Rule 139.4 mm. Intermediate Shafts, diameter as per Rule 139.4 mm. Thickness of cylinder liners 18 to 16 mm.  
as fitted 139.4 mm.

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched yes Means of lubrication grease  
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. 1 off each, 12 ton per hr. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
Lubricating Oil Pumps, No. and size 1 off each, 14 ton per hr. Cog wheel type.

Air Compressors, No. See main engine No. of stages 1 Diameters 1130 cu. ft./min. Driven by Engine  
Scavenging Air Pumps, No. 1 off each. Roots type. Diameter 1130 cu. ft./min. Driven by Engine

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 Inspection door  
Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 1 Cubic capacity of each 60 litres Internal diameter 1-2 5/8 in. Working pressure by Rules Shell 7/8 Fm 2 1/2  
Material steel Range of tensile strength Fm 26/30 Working pressure by Rules 356 lb/sq. in.

Starting Air Receivers, No. one Total cubic capacity 60 litres Internal diameter 1-2 5/8 in. Working pressure by Rules Shell 28/32 Fm 26/30  
Material steel Range of tensile strength Fm 26/30 Working pressure by Rules 356 lb/sq. in.

ELECTRIC GENERATORS:—Type Ip m Pressure of supply 225 volts. Load 780 Amperes. Direct or Alternating Current Direct  
If alternating current system, state frequency of periods per second 50

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 10 ft.

is an adjustable regulating resistance fitted in series with each shaft 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 yes Receivers yes Separate Tanks yes  
SPARE GEAR as per attached list.

The foregoing is a correct description,  
FOR HARLAND AND WOLFF, LIMITED.

*Wm. J. Blaght*  
Flintston Secretary

Manufacturer.



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Lloyd's Register  
Information  
W185-075

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

**SEE ACCOMPANYING MACHINERY REPORT.**

Dates of Examination of principal parts—Cylinders 4-6+13/10/37 Covers 4-6+13/10/37 Pistons 24-11-37 Piston rods 21-1-38

Connecting rods 24-11-37 21-1-38 Crank and Flywheel shaft 4-11-37 Intermediate shaft ✓

Crank and Flywheel shaft, Material Steel Identification Mark 7856 P.F. 7857 P.F. Intermediate shafts, Material ✓ Identification Marks

Is this machinery duplicate of a previous case no If so, state name of vessel ✓

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

These auxiliary engines have been built under Special Survey and in accordance with the Approved plans and the Rules of this Society. The materials and workmanship are good. The engines have been efficiently installed in position on board the vessel and afterwards tried under full working conditions with satisfactory results. Together with the main engines, this machinery is eligible in my opinion to be classed in the Register Book with notation of ✓ LMC 3.38.

15/4/38

The amount of Fee ... £ ✓ : When applied for, 19...  
 Travelling Expenses (if any) £ : : When received, 19...

P. Fitzgerald  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 12 APR 1938**  
 Assigned **SEE ACCOMPANYING MACHINERY REPORT.**



Rpt. 13.  
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1m.7.26—Transfer.  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)