

16 APR 1936

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 102414

Date of writing Report 13<sup>th</sup> Jan 1936 When handed in at Local Office 14 JAN 1936 Port of London  
No. in Survey held at Bedford Date, First Survey 24<sup>th</sup> October 1935 Last Survey 23<sup>rd</sup> December 1935  
Reg. Book. Number of Visits 10

Single on the Twin Triple Quadruple Screw vessel M.V. BABINDA Tons Gross 659 Net 325  
Built at Bowling By whom built Scott & Sons Yard No. 337 When built 1936  
Owners Australasian United Steam Navigation Co. Ltd. Port belonging to Maryborough  
Oil Engines made at Bedford By whom made W.H. Allen, Sons & Co. Ltd. Contract No. K1/54311 When made 1935  
Generators made at Bedford By whom made W.H. Allen, Sons & Co. Ltd. Contract No. E1/54312 When made 1935  
No. of Sets 3 Engine Brake Horse Power 180 Nom. Horse Power as per Rule 51.4 Total Capacity of Generators 120 Kilowatts.  
(3 x 60) (3 x 40 kW)

OIL ENGINES, &c.—Type of Engines Airless injection (2830) 2 or 4 stroke cycle 4 Single or double acting single  
Maximum pressure in cylinders 680 lb/sq. in. Diameter of cylinders 230 mm Length of stroke 300 mm No. of cylinders 2 (each) No. of cranks 2 (each)  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 268 mm Is there a bearing between each crank Yes  
Revolutions per minute 435 Flywheel dia. 1340 mm Weight 4000 lb. Means of ignition Compression Kind of fuel used Heavy oil.  
Crank Shaft, dia. of journals as per Rule 127 mm as fitted 130 mm Crank pin dia. 130 mm Crank Webs Mid. length breadth 200 mm Mid. length thickness 60 mm Thickness parallel to axis shrunk Thickness around eyehole  
Flywheel Shaft, diameter as per Rule as fitted bent shaft Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 17 mm  
Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication Forced.  
Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material  
Cooling Water Pumps, No. 2 (each sufficient for 2 engines) Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
Lubricating Oil Pumps, No. and size One 5 gallon per minute (1 per engine)  
Air Compressors, No. 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 What means are provided for cleaning their inner surfaces  
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. Three Total cubic capacity 5 x 3 = 15 cu. ft. Internal diameter 18" thickness 5/16"  
Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 26/30 ton Working pressure by Rules 398 lb/sq. in. actual 300 lb/sq. in.

ELECTRIC GENERATORS:—Type Open with comp. Rating 63° F. 6 hours. actual 300 lb/sq. in.  
Pressure of supply 220 volts. Load 182 x 3 = 546 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. 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 5-12-29 Receivers Separate Tanks  
(If not, state date of approval)  
SPARE GEAR 1 cylinder cover, 1 cylinder liner, 1 set of studs for 1 cylinder cover, 1 set fuel pipes for each engine, 1 chain drive for cam shaft, 1 ball bearing for each fly in one engine, 2 pistons complete with gudgeon pins, 3 gudgeon pin bushes, 3 sets of piston & scraper rings, 1 pair bottom end bearings, 1 pair main bearings, 1 thrust bearing, 1 pair bottom end bolts, 1 pair main bearing bolts, 1 fuel pump complete, 3 fuel pump barrels & plungers, 7 fuel pump delivery valves and 4 seats, 1 fuel valve (needle & magnet), 2 inlet, exhaust & starting air valves complete with 1000s of springs, 12 additional springs for fuel valve, inlet & exhaust valves. 2 governor springs  
Cooling water pumps: 1 impeller & spindle for F.W. cooling pump, 1 chain drive for same, 1 impeller, 1 armature 2 sets of brushes, 1 set brush holders 1 set of rings & brushes for 1 dynamo  
Generator spares: 1 armature, 2 sets brush boxes, 3 sets brushes for 1 dynamo, 1 dynamo bearing bush, 9 c.

The foregoing is a correct description,

W.H. Allen, Sons & Co., Ltd.

Manufacturer.

W.H. ALLEN, SONS & CO., LTD.

Lloyd's Register Foundation

01110-01119-0109



Dates of Survey while building { During progress of work in shops - 1935. Oct. 24, 30. Nov. 8, 18, 21, 26, Dec. 3, 9, 19, 23. = 10 visits.  
During erection on board vessel -  
Total No. of visits

Dates of Examination of principal parts—Cylinders 21/11/35 & 9/12/35 Covers 21.11.35 Pistons 21.11.35 Piston rods ✓

Connecting rods 21.11.35 Crank and Flywheel shaft 1:- 30/10/35 2, 8.11.35 Intermediate shaft ✓

Crank and Flywheel shafts, Material 4.2. Steel.

Identification Mark

LLOYDS 6044  
MAB. 4.10.35  
SAL 30.10.35

LLOYDS 6043  
MAB. 4.10.35  
SAL 8.11.35

LLOYDS 6029  
MAB. 27.9.35  
SAL 8.11.35

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. Workmanship good.)

These three heavy oil engines have been specially surveyed during construction and are in accordance with the approved plan and the Rules. The materials used have been made at works approved by the Committee and tested by the Surveyors to this Society. Full power, 10% overload, governing and insulation tests were witnessed each engine being direct coupled to its generator and all found satisfactory. They have now been dispatched to Glasgow for fitting on board.

Three on reception. Manned:  
were tested by hydraulic  
pressure to 600 lb. at

LLOYDS 4151  
TP 600 lb  
HP 300 lb  
CHLP 5.9.35

LLOYDS 4178  
TP 600  
HP 300  
CHLP 13.9.35

LLOYDS 4177  
TP 600  
HP 300  
CHLP 13.9.35

All work with the mountings fitted. 9.4%

Attached hereto: Copy of Special Certificate for an receiver.  
Loring certificate 2 m n° for bank shafts  
Makin Certificate 4 m n° for 3 working 1 spare armature.

The amount of Fee ... £ 15.15.0

When applied for,  
14 JAN 1936

Travelling Expenses (if any) £ 1.19.0

When received,  
23.10.36

(per hour fee)

Geo. A. Lang

Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 APR 1936

Assigned See Gb. R.M. No. 56871



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