

Newcastle-on-Tyne No. 98606

4c.

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 108469

of writing Report 18 March 1940 When handed in at Local Office 27 MAR 1940 Port of London  
 in Survey held at Bedford Date, First Survey 21 November 1939 Last Survey 11 March 1940  
 on the Single motor "PORT NAPIER" Number of Visits 15  
Triple Screw vessel  
Quadruple  
 at Newcastle By whom built Swan Hunter & Wigham Richardson Yard No. 1569 When built 1940  
Port Line Ltd Port belonging to London  
 Engines made at Bedford By whom made W. H. Allen & Sons Ltd. Contract No. K/82009 When made 1940  
 Generators made at " By whom made " Contract No. " When made "  
 of Sets 3 Engine Brake Horse Power 550 Nom. Horse Power as per Rule 333 Total Capacity of Generators 375 Kilowatts.

ENGINES, &c.—Type of Engines Heavy Oil 2 or 4 stroke cycle 4 Single or double acting single  
 Maximum pressure in cylinders 650 lb/sq. in. Diameter of cylinders 350 in. Length of stroke 470 in. No. of cylinders 6 No. of cranks 6  
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 424 in. Is there a bearing between each crank yes  
 Revolutions per minute 350 Flywheel dia. 1800 in. Weight 8800 lbs Means of ignition Compression Kind of fuel used Diesel oil  
 Crank Shaft, dia. of journals 208 as per Rule 210 in. Crank pin dia. 210 in. Crank Webs 310 in. Mid. length breadth 105 in. Thickness parallel to axis "  
 as fitted 210 in. Mid. length thickness 105 in. Thickness around eyehole "  
 Wheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 23 in.  
 as fitted as fitted Means of lubrication Forced  
 Is there a governor or other arrangement fitted to prevent racing of the engine when declutched yes  
 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material "  
 Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel "  
 Lubricating Oil Pumps, No. and size one rotary on each engine  
 Compressors, No. 1 No. of stages 1 Diameters " Stroke " Driven by "  
 Sucking Air Pumps, No. 1 Diameter " Stroke " Driven by "

RECEIVERS:—Have they been made under Survey yes State No. of Report or Certificate "  
 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 "  
 Is there a drain arrangement fitted at the lowest part of each receiver yes  
 High Pressure Air Receivers, No. 1 Cubic capacity of each " Internal diameter " thickness "  
 Seamless, lap welded or riveted longitudinal joint yes Material " Range of tensile strength " Working pressure by Rules "  
 Starting Air Receivers, No. 3 Total cubic capacity 33.6 cu ft. Internal diameter 1-11 7/8 in. thickness 5/16 in.  
 Seamless, lap welded or riveted longitudinal joint welded Material Steel Range of tensile strength 26/30 in. Working pressure by Rules 300 lb/sq. in.

ELECTRIC GENERATORS:—Type open type  
 Pressure of supply 220 volts. Full Load Current 1710 Amperes. Direct or Alternating Current Direct  
 Alternating current system, state the periodicity yes Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on and off yes  
 Generators, are they compounded as per rule yes Is an adjustable regulating resistance fitted in series with each 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 the generators under 100 kw. full load rating, have the Makers supplied certificates of test yes and do the results comply with the requirements yes  
 Are the generators 100 kw. or over have they been built and tested under survey yes

ANS. Are approved plans forwarded herewith for Shafting 5.12.38 Receivers 24.4.39 Separate Tanks yes  
 (If not, state date of approval)

ARE GEAR 1 cylinder head, 1 cylinder liner, 1 piston complete with gudgeon pin  
 bottom end bolts, 8 main bearing studs & nuts, 48 piston & 12 scraper rings,  
 Fuel injectors, 3 exhaust valves with springs etc, 3 starting air valve assembly,  
 Fuel pumps, 3 Fuel pump delivery valves, 6 nozzles, 1 safety valve  
 main bearings, 2 thrust bearings, 6 top end trusses, 6 gudgeon pins &  
 bearings, 1 Lub. oil pump complete, 1 crankshaft drive chain, 6 Fuel  
 injection pipes, 1 Dynamo bearing, 1 set main field coils, 54 brushes,  
9 brush holders. Valves, springs, joints, bolts & nuts etc.

The foregoing is a correct description.

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

Manufacturer.

W.H. 20/3/40



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Lloyd's Register  
Foundation

2500-12M



1940  
 1939. Nov 21<sup>st</sup> 24<sup>th</sup> Dec 6<sup>th</sup> 8<sup>th</sup> Jan 25<sup>th</sup> 29<sup>th</sup> Feb 5<sup>th</sup> 7<sup>th</sup> 9<sup>th</sup> 13<sup>th</sup> 15<sup>th</sup> 19<sup>th</sup> 21<sup>st</sup> 28<sup>th</sup>  
 Dates of Survey while building { During progress of work in shops - -  
 { During erection on board vessel - - -  
 Total No. of visits 15

Dates of Examination of principal parts—Cylinders 21.11.39 29.1.40 5.2.40  
 29.1.40 29.1.40 Covers 29.1.40 6.12.39 8.12.39  
 Connecting rods 25.1.40 5.2.40 Crank and Flywheel shafts 15.2.40  
 Intermediate shafts 22.5.38 HAG 6.12.39  
 Identification Marks LLOYDS 753 T.B. 1031 7.609 7.4.38 JHM 8.12.39  
 LLOYDS 849 T.B. HMR 1116 HAG 15.2

Crank and Flywheel shafts, Material

Steel

Intermediate shafts, Material

Identification Marks

Identification marks on Air Receivers 29.81.382. £1653. LLOYDS 7437. 600 A.S. W.P. 300 23.11.39. HAG 7.2.40.  
 39.81.382. £1654 LLOYDS TEST. A.S. 600 4 W.P. 300 23.11.39. HAG 7.2.40.  
 39.81.382 £1655. LLOYDS TEST. A.S. 600 4 W.P. 300 27.11.39. HAG 7.2.40.

Is this machinery duplicate of a previous case

If so, state name of vessel

General Remarks

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

The generator sets have been built under Special Survey in accordance with the requirements of the Rules and approved plans, the steel was made at Works approved by the Committee, the workmanship is good and on completion the generators were tested upon the bench under full and overload conditions with satisfactory results.

The generators have been dispatched to Newcastle for fitting on board the vessel.

These three Auxy Oil Engine Dynamo Sets or Units have been satisfactorily installed on the vessel, "Port Napier," Yard No 1569 built by S. H. & R. Newcastle on Tyne.

The machinery was tested under full load working conditions and found satisfactory.

The amount of Fee ... £50-8-0

When applied for,

Travelling Expenses (if any) £ 5-11-6

When received,

FRI. 12 JUL 1940

Committee's Minute

Assigned

See Nwc. J.E. 98606

M. J. Garriett  
 Surveyor to Lloyd's Register of Shipping.

Rpt. 13.

RE

Date of writing Report...

No. in Survey h  
 Reg. Book.

on the...

Built at Newcas

Owners. Port

Electrical Installation

Is vessel fitted for

Have plans been submit

Heating 220 Power

has the governing been

trip switch as per Rule.

if not compound wound

arranged to run in paral

Positive

test for machines under

of the generators as per

near unprotected combust

injury and damage from

contact Yes Swi

engine r

are they in accessible posi

and oil Yes, if sit

material is used for the p

semi-insulating material

Is the construction as per

to pilot and earth lamps,

side of switches Yes

Circuit breaker

and time de

and for each outgoing circui

switches on

Are compartments containi

ammeters 3 voltm

equaliser connection Yes

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