

Rpt. 4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 127533

Received at London Office 12 AUG 1953

Date of writing Report 24/7/53 19 When handed in at Local Office 10/8/53 19 Port of Ipswich

No. in Survey held at Colchester Date, First Survey 18/2/53 Last Survey 15/5/53 19 Reg. Book. Number of Visits 2.

Single on the Twin Triple Quadruple Screw vessel S.S. "WORLD HARMONY" Tons Gross Net.

Built at NEWCASTLE ON TYNE By whom built Vickers Armstrong & Co Ltd Yard No. 135. When built 1954

Owners WORLD TANKERS CORPORATION. Port belonging to PIRENAS

Oil Engines made at Colchester By whom made Davey Paxman & Co Ltd Engine No. 52665. When made 5/53.

Generators made at Ipswich By whom made Laurence Scott & Co Ltd Generator No. 222845. When made 11/52.

No. of Sets 1. B.H.P. of each Set 152. M.N. as per Rule Capacity of each Generator 100 Kilowatts.

Is Set intended for essential services.

OIL ENGINES, &c.—Type of Engines 6RPHZ Type Diesel Engine 2 or 4 stroke cycle 4 Single or double acting Simple

Maximum pressure in cylinders 850 lb Diameter of cylinders 7 Length of stroke 7 3/4 No. of cylinders 6 No. of cranks 6

Mean indicated pressure 110 lb Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 4 1/2

Is there a bearing between each crank Yes. Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 256 lb/in/sec<sup>2</sup> Revolutions per minute 900.

Flywheel dia. 31 Weight 650 lb. Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals 4 1/2 Crank pin dia. 4 1/8 Crank Webs Mid. length breadth 4 Thickness parallel to axis 1 7/8 shrunk Mid. length thickness 1 7/8 Thickness round eye-hole

Flywheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

Are means provided to prevent racing of the engine Yes. Means of lubrication Grease Kind of damper if fitted

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

Cooling Water Pumps, No. and how driven 1 R.W. 1 R.W. belt drive Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size One @ 1200 GPH.

Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps or Blowers, No. How driven

AIR RECEIVERS:—Have they been made under Survey State No. of Report or Certificate

(other than main engines) State full details of safety devices

Can the internal surfaces of the receivers be examined and cleaned

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

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

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure

ELECTRIC GENERATORS:—Type Laurence Scott marine Drip Proof Reversing Field Shunt Pole Alternator

Pressure of supply 440 volts. Full Load Current 132 Amperes. Direct or Alternating Current Alternating

If alternating current system, state the periodicity 60 Has the Automatic Governor been tested and found as per Rule when full 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 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 Are the lubricating arrangements of the generators as per Rule

If the generators are under 100 kw. full load rating, have the makers supplied certificates of test Yes and do the results comply with the requirements

If the generators are 100 kw. or over have they been built and tested under survey Yes. Stamp per Lloyd's Register F.H.T. 11/11/52. 222845.

Details of driven machinery other than generator

PLANS.—Are approved plans forwarded herewith for Shafting 4/5/51. Receivers. Separate Tanks

(If not, state date of approval) Yes. 8/7/52. Armature shaft Drawing No.

Have Torsional Vibration characteristics if applicable been approved (State date of approval and name of previous duplicate case, if any) Yes.

Has the spare gear required by the Rules been supplied Yes.

The foregoing is a correct description,

For DAVEY PAXMAN & CO. LIMITED

Manufacturer.

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Dates of Survey while building During progress of work in shops - 18/2/53 15/5/53.  
During erection on board vessel -  
Total No. of visits 2 (in shops)  
Dates of Examination of principal parts—Cylinders 18/2/53 Covers 18/2/53 Pistons 18/2/53 Piston rods.  
Connecting rods 18/2/53 Crank and Flywheel shafts 18/2/53 Intermediate shafts.  
Crank shaft Material *Super Steel* Tensile strength *3 1/2 x 34/100 UTS. 64 Tons*  
Elongation *24%* Identification Marks *L.R. 918C. C.D. 3/9/52.*  
Flywheel shaft, Material *Steel* Identification Marks *34/100*  
Identification marks on Air Receivers *001*

Is this machinery duplicate of a previous case. *Yes.* If so, state name of vessel *V.A. 999/1000 and 132.*

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

*This diesel engine has been built under Survey in accordance with plans approved and the requirements of the Rules. Steel used in the manufacture has been made at works approved by the Committee and under the supervision of the Society's Surveyors. The workmanship is good, and on completion, the generating set was tested at full load and 10% overload when the governors were tried and all found to be satisfactory.*

*This generating set is in my opinion, suitable for inclusion in + LMC when satisfactorily installed on board.*

*L. Roberts*

NEWCASTLE-ON-TYNE, No 111672.

*This engine has been installed in S.S. "WORLD HARMONY", tried under full load conditions, governors tested and found to operate satisfactorily.*

*T. Shorris*

SURVEYOR TO LLOYD'S REGISTER,  
NEWCASTLE-ON-TYNE.

The amount of Fee ... £ 14 : 10 : 0 When applied for 10/8/53 19 53  
Travelling Expenses (if any) £ : 15 : 6 When received 19

FRIDAY 22 OCT 1954

Committee's Minute

Assigned

*See Rpt. 4th*

Surveyor to Lloyd's Register of Shipping



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