

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 10060

Received at London Office 23 MAY 1953

Form No. 4c. Date of writing Report 19 When landed in at Local Office 19 Port of

No. in Survey held at  Date, First Survey 17-12-52 Last Survey 16-5-1953  
 Reg. Book. Number of Visits 3

Single on the Twin Triple Quadruple Screw vessel M.V. PUSPARAGAM. Tons Gross  Net

Built at WATERHUZEN By whom built J. PATTJE Yard No. 217 When built 1953

Owners GOVERNMENT OF INDONESIA Port belonging to

Engines made at AMSTERDAM By whom made KROMHOUT MOTOREN FABRIEK Engine No. 13046 When made 1953

Generators made at SLIKKERVEER By whom made SMIT Generator No. 40218 When made 1953

No. of Sets ONE B.H.P. of each Set 40 M.N. of each Set as per Rule 8 Capacity of each Generator 25 Kilowatts

Set intended for essential services AUX

**OIL ENGINES, &c.**—Type of Engines HEAVY OIL ENGINE 4 G.S.V. 108. 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 55 KC/50 C.M. Diameter of cylinders 108 M.M. Length of stroke 152.4 M.M. No. of cylinders 4 No. of cranks 4

Indicated pressure 7.7 KC/50 CM Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 122 M.M.

Is there a bearing between each crank YES Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)  Revolutions per minute 1000

Flywheel dia.  Weight  Means of ignition COMPRESSION Kind of fuel used DIESEL

Crank Shaft, Solid forged AS APP dia. of journals 82.55 M.M. Crank pin dia. 73 M.M. Crank Webs Mid. length breadth 103.6 M.M. Thickness parallel to axis

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 FORCED 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-BELT Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size ONE - 600 LT/HR.

Air Compressors, No. ONE No. of stages 2 Diameters 75-85 M.M. Stroke 70 M.M. Driven by CLUTCH

Saving Air Pumps or Blowers, No.  How driven

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

State full details of safety devices

Are 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

Working 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 G 310.

Pressure of supply 110 volts. Full Load Current 227 Amperes. Direct or Alternating Current DIRECT

Is an alternating current system, state the periodicity  Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown 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 shielded that they cannot be accidentally earthed, short circuited, or touched YES Are the lubricating arrangements of the generators as per Rule YES

Do 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 YES

Do the generators are 100 kw. or over have they been built and tested under survey YES

Details of driven machinery other than generator BALLAST PUMP BELT DRIVEN NO 3701. CAPACITY 35 M<sup>3</sup>/HR.

**SPARES.**—Are approved plans forwarded herewith for Shafting RETAINS FOR USE Receivers  Separate Tanks

Have Torsional Vibration characteristics if applicable been approved  Armature shaft Drawing No.

Are the spare gear required by the Rules been supplied MAKERS SPARES

The foregoing is a correct description,

KROMHOUT MOTOREN FABRIEK  
 D. Goedkoop Jr. N.V. Amsterdam

Manufacturer.



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Lloyd's Register Foundation

012522-012526-0218

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Dates of Survey while building: During progress of work in shops - - 17/12/52, 22/12/52, 16/5/53; During erection on board vessel - - ; Total No. of visits

Dates of Examination of principal parts: Cylinders 22.12.52, Covers 17-12-52, Pistons 17-12-52, Piston rods

Connecting rods 17-12-52, Crank and Flywheel shafts 17-12-52, Intermediate shafts

Crank shaft: Material EIRSTRO STEEL, Tensile strength 71.6 kg/sq. mm; Elongation on 28 } 31, 40 } 25, 50 mm } 25; Identification Marks LLOYDS NO 2320, H.S. 29-9-52, J.D. 17-12-52

Flywheel shaft, Material; Identification Marks

Identification marks on Air Receivers

Is this machinery duplicate of a previous case YES If so, state name of vessel STANDARD TYPE

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

This engine has been built under Special Survey in accordance with the Society Rules, approved plans & Secretary's letters. The materials used examined & test all as required with satisfactory results & the workmanship found good. Upon completion the engine was examined & tested on makers test bed under full working conditions, driving generator, air compressor & ballast pumps with satisfactory results. This set is in my opinion eligible to merit the favourable consideration of the Committee. Copies of Amsterdam certificate NO F 4078A for crankshaft & whisks of certificates for generator, ballast pump & compressor attached hereto.

4in. 5.52-T. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee Minutes.)

The amount of Fee ... F 90. : When applied for 21.5 1953; Travelling Expenses (if any) F 1.- : When received 19

FRIDAY - 4 DEC 1953

Committee's Minute; Assigned; See minute on hull Fe. etc.

J. Dobbie, Surveyor to Lloyd's Register of Shipping, Lloyd's Register Foundation