

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 123838

Received at London Office

Date of writing Report 29-11-1951 When handed in at Local Office 10/11 1951 Port of  Ipswich

No. in Survey held at  Colchester  Date, First Survey  17-8-51  Last Survey  28-11-1951   
eg. Book. Number of Visits  3

Single on the Twin Triple Quadruple } Screw vessel  DREDGER "KARITEA"  Tons { Gross  
Net

Built at  BRISTOL  By whom built  CHAS. HILL LD.  Yard No.  380  When built

Port belonging to

Engines made at  COLCHESTER  By whom made  DAVEY PAXMAN & CO. LD.  Contract No.  52575  When made  1951

Generators made at By whom made Contract No. When made

No. of Sets  ONE  Engine Brake Horse Power  364  M.N. as per Rule Total Capacity of Generators  Kilowatts.

Set intended for essential services

**OIL ENGINES, &c.** Type of Engines  HEAVY OIL (6 RPLZ)  2 or 4 stroke cycle  4  Single or double acting  S

Maximum pressure in cylinders  300 lbs.  Diameter of cylinders  9 1/2 "  Length of stroke  12 "  No. of cylinders  6  No. of cranks  6

Mean indicated pressure  107 lbs.  Firing order in cylinders  1, 3, 5, 6, 4, 2  Span of bearings, adjacent to the Crank, measured from inner edge to inner edge  10 5/8 "

Is there a bearing between each crank  YES  Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)  3950 lb. ft.<sup>2</sup>  Revolutions per minute  650

Flywheel dia.  3'-4"  Weight  3 1/2 cwt.  Means of ignition  COMPRESSION  Kind of fuel used  DIESEL

Crank Shaft, dia. of journals as per Rule  6 1/2 "  Crank pin dia.  6 "  Crank Webs Mid. length breadth shrunk Thickness parallel to axis Thickness round eyehole

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

Are there means provided to prevent racing of the engine when declutched  YES  Means of lubrication  FORCED  Kind of damper if fitted

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.  ONE  Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size  ONE GEARED

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

Advancing Air Pumps, No. Diameter Stroke Driven by

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

each receiver, which can be isolated, fitted with a safety valve as per Rule

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

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

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

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

**ELECTRIC GENERATORS:**—Type

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

Is the 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 Generators, are they compounded as per Rule is an adjustable regulating resistance fitted in series with each shunt field

Are all terminals accessible, clearly marked, and furnished with sockets Are they so spaced

Are the generators shielded that they cannot be accidentally earthed, short circuited, or touched Are the lubricating arrangements of the generators as per Rule

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

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

Are there tails of driven machinery other than generator

Are approved plans forwarded herewith for Shafting  4-12-51  Receivers Separate Tanks

Are torsional vibration characteristics if applicable been approved  12-12-51  Armature shaft Drawing No.

**SHAFTING AND GEAR**

The foregoing is a correct description,

Davey Paxman & Co. Limited  Manufacturer.  
**FOR DAVEY PAXMAN & CO. LIMITED**



Dates of Survey while building { During progress of work in shops - - 1951: Aug. 17, Oct. 22, Nov. 28  
 { During erection on board vessel - - -  
 Total No. of visits 3 (2 on slips)

Dates of Examination of principal parts—Cylinders 22-10-51 Covers 17-8-51 Pistons 22-10-51 Piston rods ✓  
 Connecting rods 22-10-51 Crank and Flywheel shafts 22-10-51 Intermediate shafts ✓

Crank shaft { Material STEEL Tensile strength 45.6 TONS.  
 { Elongation 21% Identification Marks LLOYDS. N° 4237.

Flywheel shaft, Material ✓ Identification Marks ✓

Identification marks on Air Receivers ✓

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 engine has been constructed under special survey in accordance with the approved plan, Rule requirements & Secretary's letter. The materials & workmanship are sound & of good description. The engine has been tested under full load conditions & found satisfactory & has been dispatched to Bristol.

5m. 148-T. (MADE AND PRINTED IN ENGLAND)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ 18 : 4 : : When applied for 10 Jan 1952.  
 Travelling Expenses (if any) £ 1 : 10 : : When received 19

*Myrall*

TUES. 23 SEP 1952

Committee's Minute  
 Assigned *Surf E. mchly rph*

