

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 16926

(LEGHORN N: 1306)

Date of writing Report 12/9/48 19 When handed in at Local Office 18.11. 1948 Port of GENOA.

No. in Survey held at GENOA & LEGHORN Date, First Survey 18/2/48 Last Survey 15/8/48 19

Reg. Book. ✓ on the ^{Single} ~~Pin~~ ^{Triple} ~~Pin~~ ^{Quadruple} ~~Pin~~ Screw ~~used~~ TRAWLER "SANTA MAFALDA" Number of Visits 14 Tons { Gross 1272 Net 700

Built at LEGHORN By whom built ODERO-TERNI-ORLANDO Yard No. 221 When built 1948

Owners EMPRESA DE PESCA DE AVEIRO Port belonging to AVEIRO

Oil Engines made GENOA-SAMPIEROARENA By whom made S.A. ANSALDO-STABIL. MECCANICO Contract No. 21314486 When made 1948

Generators made GENOA-CORNIGLIANO By whom made S.A. ANSALDO-STABIL. ELETROTECN. Contract No. 13525 When made 1948

No. of Sets ONE Engine Brake Horse Power 120 M.N. as per Rule 30 Total Capacity of Generators 60 Kilowatts.

Is Set intended for essential services YES.

OIL ENGINES, &c.—Type of Engines ANSALDO Q2131/4-AIRLESS INJECTION 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 55 Kg/cm² Diameter of cylinders 215 mm Length of stroke 310 mm No. of cylinders 4 No. of cranks 4Mean indicated pressure 6.5 Kg/cm² Firing order in cylinders 1-3-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 264 mmIs there a bearing between each crank YES Moment of inertia of flywheel (16 m² or Kg. cm²) 1850 Kg cm² Revolutions per minute 430

Flywheel dia. 1350 mm Weight 600 Kg. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL.

Crank Shaft, dia. of journals as per Rule as approved 130 mm Crank pin dia. 130 mm Crank Webs Mid. length breadth 200 mm Thickness parallel to axis. ✓

as fitted 130 mm Mid. length thickness 64 mm Thickness round eyehole. ✓

Flywheel Shaft, diameter as per Rule as approved 130 mm Intermediate Shafts, diameter as per Rule ✓ General armature, moment of inertia (16 m² or Kg. cm²) 196.35 Kg cm²

as fitted 130 mm Are means provided to prevent racing of the engine when declutched GOVERNOR Means of lubrication FORCED Kind of damper if fitted FLEXIBLE COUPLING

Are the cylinders fitted with safety valves YES ✓ Are the exhaust pipes and silencers water cooled or lagged with non-conducting material LAGGED.

Cooling Water Pumps, No. ONE: 500 mm stroke 53 mm Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Lubricating Oil Pumps, No. and size ONE GEAR TYPE: 2300 lit/h.

Air Compressors, No. ONE ✓ No. of stages TWO Diameters HP. 80 mm - LP. 185 mm Stroke 150 mm Driven by ENGINE THROUGH A CLUTCH.

Scavenging Air Pumps, No. ✓ Diameter. ✓ Stroke. ✓ Driven by ✓

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

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 YES ✓ What means are provided for cleaning their inner surfaces. WIRE BRUSHES

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. ONE ✓ Total cubic capacity 160 lit Internal diameter 351 mm thickness 8.5 mm

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material STEEL Range of tensile strength 55 Kg/cm² Working pressure by Rules 35 Kg/cm²

ELECTRIC GENERATORS:—Type PROTECTED-SELF VENTILATED.

Pressure of supply 220 volts. Full Load Current 273 Amperes. Direct or Alternating Current DIRECT.

If alternating current system, state the periodicity. ✓ 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 17-2-48 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 ✓

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. YES ✓

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

Details of driven machinery other than generator AIR COMPRESSOR DRIVEN BY ENGINE THROUGH A CLUTCH ✓

PLANS.—Are approved plans forwarded herewith for Shafting 23/3/48 Receivers 10/6/47 Separate Tanks. ✓

(If not, state date of approval) Have Torsional Vibration characteristics if applicable been approved. 26/5/48 1/4/48 Armature shaft Drawing No. 6/1/48

(state date of approval) SPARE GEAR AS PER RULES. ✓ for 430 mm

The foregoing is a correct description, and the particulars of the installation are as approved for torsional vibration characteristics.

ANSALDO S. A.
STABILIMENTO MECCANICO
Via Vico Dilettante
Manufacturer.

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Foundation

004799-004809-0090

Dates of Survey while building { During progress of work in shops - -) FROM 18/2/48 To 13/5/48
{ During erection on board vessel - -) FROM 19/5/48 To 15/8/48
Total No. of visits 14.

Dates of Examination of principal parts—Cylinders 18/2/48 Covers 4/3/48 Pistons 4/3/48 Piston rods. ✓

Connecting rods 26/2/48 Crank and Flywheel shafts 26/2/48 Intermediate shafts ✓

Crank shaft { Material STEEL Tensile strength $44 \div 50 \text{ Kg/mm}^2$
Elongation $29 \div 25 \%$ Identification Marks LLOYD'S 854 AG 26-2-48

Flywheel shaft, Material ✓ Identification Marks ✓

Identification marks on Air Receivers 1-90137
LLOYD'S TEST
40 Kg/cm²
W.P. 35 Kg/cm²
G.M. 11-2-48

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.) THIS SET HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE'S REQUIREMENTS. THE TORSIONAL VIBRATION CHARACTERISTICS OF THE COMPLETE DYNAMIC SYSTEM HAVE BEEN APPROVED FOR A SERVICE SPEED OF 430 R.p.m. THE MATERIALS AND WORKMANSHIP ARE GOOD. THE SET HAS BEEN SATISFACTORILY TITLED ON BOARD AND AFTERWARDS TRIED UNDER WORKING CONDITION WITH SATISFACTORY RESULTS.

10. S. 46. -T. (MADE AND FORWARDED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee Minute.)
The amount of Fee CHARGED BY GEN. OFFICE (for Gen. D. H. N. 2121 dated 3/6/58) When applied for 19.
Travelling Expenses (if any) £ : : When received 19.
Committee's Minute
Assigned
FRI. 7 JAN 1949
Surveyor to Lloyd's Register of Shipping.
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