

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 19132

Received at London Office

Writing Report 29-12-52

When handed in at Local Office 25-1-1953

Port of GENOA

7 FEB 1953

Survey held at GENOA

Date, First Survey 4-9-50

Last Survey 22-12-52

Number of Visits 12

Single
on the Twin
Triple
Quadruple

Screw vessel

"ANDREA DORIA"

Tons Gross 29082
Net 15788

GENOA-SESTRI

By whom built S.A. ANSALDO-CANTIERI NAVALI

Yard No. 918

When built 1952

"ITALIA" Soc. per Azioni di NAVIGAZIONE

Port belonging to GENOA

Engines made at GENOA-SAMPIERDARENA By whom made S.A. ANSALDO-STABIL. MECCANICO

Contract No. 175

When made 1951

Engines made at GENOA-CORNIGLIANO By whom made ANSALDO-SANGIORGIO-STABIL. ELETTROTECNICI

Contract No. 14795

When made 1951

Engines ONE Engine Brake Horse Power 225 M.N. as per Rule 56.2

Total Capacity of Generators 150 Kilowatts

Intended for essential services EMERGENCY

Engines, &c.—Type of Engines ANSALDO Q265/4 - AIRLESS INJECTION 2 or 4 stroke cycle 4 Single or double acting SINGLE

Working pressure in cylinders 55 Kg/cm² Diameter of cylinders 265 mm Length of stroke 410 mm No. of cylinders 4 No. of cranks 4

Indicated pressure 6.65 Kg/cm² Firing order in cylinders 1-2-4-3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 348 mm

Clearance bearing between each crank YES Moment of inertia of flywheel (16 m² or Kg.-cm²) 6286 Kg.-cm² Revolutions per minute 400

Crank pin dia. 1400 mm Weight 1840 Kg. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL

Shaft, dia. of journals as per Rule as approved 165 mm Crank pin dia. 165 mm Crank Webs Mid. length breadth 270 mm Thickness parallel to axis shrunk

as fitted 165 mm Mid. length thickness 78.5 mm Thickness round eyehole

Shaft, diameter as per Rule as approved 165 mm Intermediate Shafts, diameter as per Rule as fitted 165 mm General armature, moment of inertia (16 m² or Kg.-cm²) 527 Kg.-cm²

Work provided to prevent racing of the engine when decoupled GOVERNOR Means of lubrication FORCED Kind of damper if fitted

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

Water Pumps, No. ONE driven by engine 590 mm stroke 100 mm Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Oil Pumps, No. and size ONE - ROTARY TYPE driven by engine - 2.7 m³/h capacity

Compressors, No. ONE 14 m³/h capacity No. of stages TWO Diameters 75 - 64 mm Stroke 60 mm Driven by Oil engine of 9 HP

Eng Air Pumps, No. Diameter Stroke Driven by

RECEIVERS:—Have they been made under Survey YES State No. of Report or Certificate Copy of certificate herewith attached

Receiver, which can be isolated, fitted with a safety valve as per Rule YES

Internal surfaces of the receivers be examined YES What means are provided for cleaning their inner surfaces WIRE BRUSHES

Drain arrangement fitted at the lowest part of each receiver YES

Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Air Receivers, No. ONE Total cubic capacity 160 litres Internal diameter 351 mm thickness 8.5 mm

Lap welded or riveted longitudinal joint SEAMLESS Material STEEL Range of tensile strength 55/65 Kg/mm² Working pressure by Rules 25 Kg/cm²

GENERIC GENERATORS:—Type ANSALDO-PROTECTED-SELF-VENTILATED

Supply of supply 220 volts Full Load Current 682 Amperes Direct or Alternating Current DIRECT

Operating current system, state the periodicity YES Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

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

Terminals accessible, clearly marked, and furnished with sockets YES Are they so spaced

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

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

Generators are 100 kw. or over have they been built and tested under survey YES

Driven machinery other than generator YES

Are approved plans forwarded herewith for Shafting 19-8-50 Receivers 10-6-47 Separate Tanks YES

Additional Vibration characteristics if applicable been approved 19-8-50 Armature shaft Drawing No. Sc. C.2149/A 19-8-50

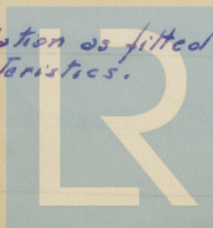
GEAR

AS PER RULES

ANSALDO S. A.

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

Manufacturer.



Lloyd's Register Foundation

Dates of Survey while building
During progress of work in shops - - FROM 4-9-50 To 7-8-51
During erection on board vessel - - FROM 18-9-51 To 22-12-52
Total No. of visits 12

Dates of Examination of principal parts - Cylinders 4-9-50 Covers 4-9-50 Pistons 18-9-50 Piston rods ✓
Connecting rods 18-9-50 Crank and Flywheel shafts 14-9-50 Intermediate shafts ✓

Crank shaft
Material S.M. STEEL Tensile strength $\geq 50 \text{ Kg/mm}^2$
Elongation $\geq 25\%$ Identification Marks LLOYD'S 694 AG 14-9-50

Flywheel shaft, Material ✓ Identification Marks ✓

Identification marks on Air Receivers 1-110945
LLOYD'S TEST
70 Kg/cm²
W.P. 35 Kg/cm²
A.G. 12-11-48

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 MATERIAL AND IS IN ACCORDANCE WITH THE APPROVED PLANS, SECRETARY'S LETTER AND RULE REQUIREMENTS. THE TORSIONAL VIBRATION CHARACTERISTICS OF COMPLETE DYNAMIC SYSTEM HAVE BEEN APPROVED FOR A SERVICE SPEED 400 R.P.M. THE MATERIALS AND WORKMANSHIP ARE GOOD.
THIS SET HAS BEEN SATISFACTORILY FITTED ON BOARD AND TRIED UNDER WORKING CONDITION WITH SATISFACTORY RESULTS.

200,000-T. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minute.)

F.E. FEE 4% 12,500:-
The amount of Fee 4% 500:-
CAR FUND 4% 1,182:-
Travelling Expenses (if any) 4% 5,243:-
REV. TAX 4% 1,374:-

When applied for 3/2/ 1953
When received 19

Committee's Minute TUES. 24 FEB 1953
Assigned See F.E. mch. rpt.

Surveyor to Lloyd's Register of Shipping
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