

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 19132

Writing Report 29-12-52 19 When handed in at Local Office 25-1-1953 Port of GENOA Received at London Office 7 FEB 1953

Survey held at GENOA Date, First Survey 19-4-50 Last Survey 22-12-52 19

on the Twin Screw vessel "ANDREA DORIA" Number of Visits 88

GROSS 29082 TONS NET 15788

GENOA-SESTRI By whom built S.A. ANSALDO-CANTERI NAVALI Yard No. 918 When built 1952

"ITALIA" Soc. per Azioni di NAVIGAZIONE Port belonging to GENOA

Lines made at GENOA-SAMPIERDARENA By whom made ANSALDO-STABIL MECCANICO Contract No. 14607003 When made 1951

Engines made at GENOA-CORNIGLIANO By whom made ANSALDO-SAN GIORGIO-STABIL ELETROTECNICI Contract No. 14607004 When made 1951

Sets 5 Engine Brake Horse Power 1125 EACH M.N. as per Rule Total Capacity of Generators 3750 Kilowatts.

Intended for essential services YES

ENGINES, &c.—Type of Engines ANSALDO Q460/7- AIRLESS INJECTION 2 or 4 stroke cycle 4 Single or double acting SINGLE

Working pressure in cylinders 55 Kg/cm² Diameter of cylinders 460 mm Length of stroke 660 mm No. of cylinders 7 No. of cranks 7

Indicated pressure 6.14 Kg/cm² Firing order in cylinders 1-3-5-4-6-4-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 597 mm

Distance between each crank YES Moment of inertia of flywheel (16 m² or Kg. cm²) 90800 Kc.cm.sec² Revolutions per minute 250

Crank pin dia 2300 mm Weight 10580 Kg. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL.

Shaft, dia. of journals as per Rule 300 mm as fitted 300 mm Crank pin dia 300 mm Crank Webs Mid. length breadth 169 mm Mid. length thickness 135.5 mm Thickness parallel to axis 169 mm Thickness round eye hole 135.5 mm

Intermediate Shafts, diameter as per Rule 300 mm as fitted 300 mm General armature, moment of inertia (16 m² or Kg. cm²) 21001 Kc.cm.sec²

Means provided to prevent racing of the engine when decelerated GOVERNOR Means of lubrication FORCEB 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. TWO driven by STARR. OUTBOARD ENGINE: 70 Ton/h each. Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Oil Pumps, No. and size ONE driven by each engine - ROTARY Type - 27 Ton/h each.

Compressors, No. TWO No. of stages TWO Diameters LP: 185 mm - HP: 80 mm Stroke 115 mm Driven by ELECTRIC MOTOR

Air Pumps, No. Diameter Stroke Driven by

RECEIVERS: Have they been made under Survey YES State No. of Report or Certificate COPY HERewith ATTACHED.

Receivers, 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 Accessible Internally.

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. FOUR Total cubic capacity 4800 litres Internal diameter 440 mm thickness 17 mm

Lap welded or riveted longitudinal joint FUSION WELDED CLASS 2 Material S.A. STEEL Range of tensile strength 42/48 Kg/mm² Working pressure by Rules 30 Kg/cm²

GENERATORS:—Type PROTECTED-VENTILATED

Supply 220 volts Full Load Current 3440 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 5-6-50 Receivers 15-2-50 Separate Tanks YES

(If not, state date of approval)

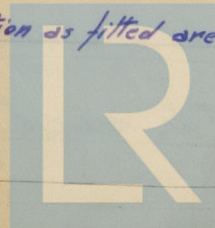
Vibrational Vibration characteristics if applicable been approved 17-5-50 Armature shaft Drawing No. S.C. 2133/B. 2-6-50

GEAR AS PER RULES

ANSALDO S.A. STABILIMOTO MECCANICO

The foregoing is a correct description and the particulars of the installation as fitted are as approved for

Manufacturer.



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Dates of Survey while building
During progress of work in shops - - FROM 13-4-50 To 18-10-51
During erection on board vessel - - FROM 20-6-51 To 22-12-52
Total No. of visits 38

Dates of Examination of principal parts - Cylinders FROM 26-6-50 To 12-3-51 Covers FROM 18-12-50 To 27-9-51 Pistons FROM 14-12-50 To 28-5-51 Piston rods ✓

Connecting rods FROM 5-10-50 To 2-4-51 Crank and Flywheel shafts FROM 3-7-50 To 18-12-50 Intermediate shafts ✓

Crank shaft Material S.M. STEEL Tensile strength 50-60 Kg/mm²
Elongation 25-19% Identification Marks LLOYDS 53.528 AG 23-4-50 LLOYDS 53.534 AG 3-6-50 LLOYDS 53.537 AG 28-9-50

Flywheel shaft, Material ✓ Identification Marks LLOYDS 53.507 AG 8-9-50 LLOYDS 53.531 AG 28-9-50

Identification marks on Air Receivers 5168-5169-5170-5171
LLOYDS TEST 60 Kg/cm²
W.P. 30 Kg/cm²
A.G. 12-2-51

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.)

THESE FIVE SETS HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIAL AND ARE IN ACCORDANCE WITH THE APPROVED PLANS, SECRETARY'S LETTERS AND REQUIREMENTS. THE TORSIONAL VIBRATION CHARACTERISTICS OF THE COMPLETE DYNAMIC SYSTEM HAVE BEEN APPROVED FOR A SERVICE SPEED OF 250 R.p.m. THE MATERIAL AND WORKMANSHIP ARE GOOD.
THESE SETS HAVE BEEN SATISFACTORILY FITTED ON BOARD, TRIED UNDER WORKING CONDITION WITH SATISFACTORY RESULTS.

F.E. FEE £1,120.000=

The amount of Fee less 25% 25%	846.000=	When applied for 3/2/53	1953
CAR FUND - - - - - 4%	25.380=	When received	1953
Travelling Expenses (if any) 5%	106.320=		
REV. TAX. - - - - - 4%	29.211=		

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

Surveyor to Lloyd's Register of Shipping
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