

Rpt. 4c.

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13965

Date of writing Report 8.4.54 When handed in at Local Office 10.4.54 Port of TRIESTE
 Received at London Office 20 APR 1954
 No. in Survey held at TRIESTE Date, First Survey Last Survey 29th March 1954
 Reg. Book. 40464 on the ~~Single~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "MARE ADRIACUM" Number of Visits See Rpt. 4b Tons Gross 20451 Net 12455
 Built at TRIESTE By whom built Cantieri Riuniti dell'Adriatico Yard No. 1773 When built 1954 - 3
 Owners Fratelli d'Amico Port belonging to TRIESTE
 Oil Engine made at TRIESTE By whom made Cantieri Riuniti dell'Adriatico Contract No. 5595 When made 1954
 Generator made at Monfalcone By whom made do Contract No. 78329 When made 1953
 No. of Sets 1 Engine Brake Horse Power 150 M.N. as per Rule 30 Total Capacity of Generators 100 Kilowatts. also two turbo sets at 450 KW each
 Is Set intended for essential services No. (Emergency or harbour use).

OIL ENGINES, &c.—Type of Engines C.R.D.A. - Sulzer 4BH22 2 or 4 stroke cycle 4 Single or double acting S.A.
 Maximum pressure in cylinders 60 kg/cm² Diameter of cylinders 220 mm Length of stroke 320 mm No. of cylinders 4 No. of cranks 4
 Mean indicated pressure 6.775 kg/cm² Firing order in cylinders 1, 2, 4, 3, Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 238 mm
 Is there a bearing between each crank yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 1450 Kg.m² Revolutions per minute 500
 Flywheel dia. 1500 mm Weight 956 Kg. Means of ignition Comp.n Kind of fuel used Diesel oil
 Crank Shaft, dia. of journals as per Rule as appd. 155 mm Crank pin dia. 145 mm Crank Webs Mid. length breadth 190 mm Thickness parallel to axis —
 as fitted — Mid. length thickness 64 mm Thickness round eye-hole —
 Flywheel Shaft, diameter as per Rule as appd. 155 mm Intermediate Shafts, diameter as per Rule as appd. 110 mm General armature, moment of inertia (16 m² or Kg.-cm.²) —
 as fitted —
 Are means provided to prevent racing of the engine when decoupled 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 yes
 Cooling Water Pumps, No. 6 T/Hr. 6 T/Hr. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 Lubricating Oil Pumps, No. and size worked from engine. 5 T/HR. Also hand operated pump Capacity 4 M³ per Hr. at 30 Kg/cm² Small Diesel
 Air Compressors, No. 1 No. of stages Diameters Stroke Driven by engine
 Scavenging Air Pumps, No. — Diameter — Stroke — Driven by —
AIR RECEIVERS:—Have they been made under Survey yes State No. of Report or Certificate Genoa A11
 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. Through upper flange
 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. 1 Total cubic capacity 100 Lts. Internal diameter 303 mm thickness 7.5 mm
 Seamless, lap welded or riveted longitudinal joint seamless Material S.M.S. Range of tensile strength 60.7 Kg/cm² Working pressure by Rules 40 kg/cm²
ELECTRIC GENERATORS:—Type C.R.D.A. Protected Self Ventilated
 Pressure of supply 220 volts Full Load Current 454 Amperes Direct or Alternating Current D.C.
 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 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 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 — and do the results comply with the requirements —
 If the generators are 100 kw. or over have they been built and tested under survey yes
 Details of driven machinery other than generator None
PLANS.—Are approved plans forwarded herewith for Shafting 28.2.1953 Receivers — Separate Tanks —
 (If not, state date of approval) 28.2.1953 Armature shaft Drawing No. 6688-15
 Have Torsional Vibration characteristics if applicable been approved (state date of approval)
SPARE GEAR Cylinder liner, piston, cylinder cover and numerous small items.

The foregoing is a correct description,
 CANTIERI RIUNITI DELL'ADRIATICO
 Fabbrica Macchine S. Andrea

Manufacturer.

DUAL CLASS

L.H. & I.



Lloyd's Register Foundation

013186-013191-0114

117. 4481.

Dates of Survey while building { During progress of work in shops - -)
{ During erection on board vessel - -) See 4a
Total No. of visits -

After bench tests
Dates of Examination of principal parts—Cylinders Sept. 1953 Covers Sept. 1953 Pistons Sept. 1953 Piston rods Sept. 1953
Connecting rods Sept. 1953 Crank and Flywheel shafts Sept. 1953 Intermediate shafts -

Crank shaft { Material E.F.S. Tensile strength 54.5 Kg/cm²
{ Elongation On 4d 33% Identification Marks SS 2429 AG

DYNAMO
Flywheel shaft, Material 45.8 Kg/cm² Identification Marks LLOYD's 6069 SG

Identification marks on Air Receivers No. 2. 128583
LLOYD's TEST 80 Kg/cm²
WP 40 Kg/cm²

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.)

The engine of this auxiliary generator set has been constructed under special survey of tested materials in accordance with the Secretary's letters, approved plans and the Society's Rule requirements.

The workmanship and materials are good.

This engine, together with two turbo generator sets rated at 450 KW each (See Genoa Cert. No. M305) have been installed on board the vessel in an efficient manner and found satisfactory when tried under full working conditions.

In my opinion these engines are eligible for full classification.

DUAL CLASS
L.R. & F.I.

less 15% Lit 33.150.-
The amount of Fee 1.650
Car fund 1.650
Travelling Expenses (if any) £ 1.094
Per Tax 3%

When applied for 10.14 19.74
When received 19

Committee's Minute

FRIDAY 28 MAY 1954

Assigned

See Rpt. 4.

J. J. Wilson.
Surveyor to Lloyd's Register of Shipping.



Lloyd's Register
Foundation