

RECEIVED

JUL 1951

# D.O. REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 13491  
JUL 1951

Received at London Office

Writing Report 4<sup>th</sup> June 1951 When handed in at Local Office 19 Port of Copenhagen

Survey held at Copenhagen Date, First Survey 1<sup>st</sup> Sept. 1950 Last Survey 18<sup>th</sup> April 1951  
Number of Visits 14

Single on the Twin Triple Quadruple Screw vessel MOTOR TANKER "COMODORO RIVADAVIA" Tons Gross Net

By whom built P. Smit Yard No. 599 When built

Lines made at Copenhagen By whom made P. Smit & Wain's Maskin- & Skibstyggers Eng. 4635 Contract No. 4636 When made 1951

Engines made at By whom made Contract No. When made

Sets 2 Engine Brake Horse Power 24345 M.N. as per Rule 2x86 Total Capacity of Generators Kilowatts

attended for essential services yes

ENGINES, &c.—Type of Engines Heavy oil engines vertical, trunk piston type 2 or 4 stroke cycle 4 Single or double acting Single  
Mean pressure in cylinders 49 1/2 lb/cm<sup>2</sup> Diameter of cylinders 245 mm Length of stroke 400 mm No. of cylinders 7 No. of cranks 7

Indicated pressure 72 3/4 lb/cm<sup>2</sup> Firing order in cylinders 1-2-4-6-7-5-3 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 315 mm  
Clearance between each crank yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 1135 kgm<sup>2</sup> WD<sup>2</sup> Revolutions per minute 425

Shaft dia. 1300 mm Weight 1226 kg Means of ignition compression Kind of fuel used Heavy oil FP above 150°F  
Shaft, dia. of journals as per Rule 151 mm as fitted 170 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 278 mm Thickness parallel to axis 90 mm  
Mid. length thickness 90 mm shrunk Thickness round eye-hole 72.5 mm

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

Means provided to prevent racing of the engine when disengaged yes 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
Lubricating Oil Pumps, No. and size 1 off 7.3 l/h

Compressors, No. 1 off 250 m<sup>3</sup>/h No. of stages 2 Diameters 216 mm - 192 mm Stroke 160 mm Driven by the engine

Refrigerating Air Pumps, No. Diameter Stroke Driven by  
RECEIVERS:—Have they been made under Survey yes State No. of Report or Certificate 1036

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

Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness  
Shell, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Refrigerating Air Receivers, No. 1 Total cubic capacity 350 litres Internal diameter 410 mm thickness 10 mm  
Shell, lap welded or riveted longitudinal joint Material SM Steel Range of tensile strength Working pressure by Rules 30 kg/cm<sup>2</sup>

ELECTRIC GENERATORS:—Type  
Voltage of supply volts Full Load Current Amperes Direct or Alternating Current

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

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

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

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

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

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

Is there any driven machinery other than generator  
ANS.—Are approved plans forwarded herewith for Shafting yes Receivers yes Separate Tanks  
(If not, state date of approval)

Torsional Vibration characteristics if applicable been approved yes E 1/7-49 Armature shaft Drawing No. 209902  
(state date of approval)

RE GEAR As per Rules



The foregoing is a correct description,

Manufacturer: Aktieselskabet  
P. Smit & Wain's Maskin- & Skibstyggers



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009486-009493-0033

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Dates of Survey while building  
During progress of work in shops - - 1/9-26/10-8/11-22/11-50 & 29/2-21/3-30/3-5/4-9/4-10/4-11/4-12/4-13/4-19/4-51  
During erection on board vessel - - -  
Total No. of visits 14

Dates of Examination of principal parts - Cylinders 5/4-10/4 Covers 5/4-10/4 Pistons 5/4-10/4 Piston rods

Connecting rods 29/2 Crank and Flywheel shafts 29/2 Intermediate shafts

Crank shaft Material Journals: SMI steel. Crank throws: Cast SM Steel. Tensile strength Journals: 32,5 1/2" Crank throws: 29,0 1/2"  
Elongation Journals: 35,4% Crank throws: 38,4%

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers No. 1036. Lloyd's Test 60 Atm. W.P. 30 Atm. GS 26-10-50.

Is this machinery duplicate of a previous case yes. If so, state name of vessel yard 596 (Smit 6) yard 597 (Smit 7) yard 598 (Smit 8)  
Cpn. Rept 12939 & Cpn. Rept 13149 & Cpn. Rept 13359

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under special survey in accordance with the requirements of the Rules, approved plans and the Secretary's letters E dated 22/10-48, 1/7-49 and 3/8-49. The material has been tested as required by the Rules and the workmanship is good. The engines have been tested under working condition in the shop found to work satisfactorily.

The amount of Fee ... No. 1032,00. When applied for 29/6 19.51  
Air receiver No. 80,00. When received 19.  
Travelling Expenses (if any) £

Committee's Minute FRI. 13 JUN 1952  
Assigned See F. E. mch. rpt. Ref 34771

J. Shwin  
Surveyor to Lloyd's Register of Shipping.  
Lloyd's Register Foundation

5011.48.-T. (MADE IN ENGLAND)  
(The Surveyors are requested not to write on or below the space for Committee Minute.)