

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No 22002

22 AUG 1936

Received at London Office

Date of writing Report 12-8-36 19 36 When handed in at Local Office 19 Port of Hamburg

No. in Survey held at Kiel Reg. Book. Date, First Survey 4-2-36 Last Survey 3-8-36 19  
Number of Visits 11

on the Single Twin Triple Quadruple Screw vessel MV Tarifa Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_

Built at Danzig By whom built F. Schichau G.m.b.H. Yard No. 1357 When built 1936  
Owners Wick. Hiebelsman Port belonging to Tönning

Oil Engines made at Kiel By whom made Deutsche Werke Kiel A.G. Contract No. 3182-84 When made 1936  
Generators made at Bremen By whom made Allg. Elektricit. Gesellschaft Contract No. 523616 When made 1936

No. of Sets 1 Engine Brake Horse Power 175 Nom. Horse Power as per Rule 50 Total Capacity of Generators 22 Kilowatts.

**OIL ENGINES, &c.**—Type of Engines Deutsche Werke's type 3M 421 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 46 kg/cm<sup>2</sup> Diameter of cylinders 280 mm Length of stroke 420 mm No. of cylinders 3 No. of cranks 3  
M. I. P. = 6.5 kg/cm<sup>2</sup> Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 311 mm Is there a bearing between each crank yes

Revolutions per minute 360 Flywheel dia. 1700 mm Weight 3970 kg Means of ignition Spark plug Kind of fuel used Diesel oil  
Crank Shaft, dia. of journals as per Rule 158 mm - 8% Mid. length breadth 250 mm Thickness parallel to axis shrink  
as fitted 170 mm Crank pin dia. 170 mm Crank Webs Mid. length thickness 87.5 mm Thickness around eyehole \_\_\_\_\_

Flywheel Shaft, diameter as per Rule 158 mm - 8% Intermediate Shafts, diameter as per Rule \_\_\_\_\_ Thickness of cylinder liners 175 mm Capred to 12.5 mm.  
as fitted 180 mm as fitted \_\_\_\_\_

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced.  
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. none Is the sea suction provided with an efficient strainer which can be cleared within the vessel.  
Lubricating Oil Pumps, No. and size 1 rotary of 1285 liters per hour

Air Compressors, No. none No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
Scavenging Air Pumps, No. none Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

**AIR RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule \_\_\_\_\_  
Can the internal surfaces of the receivers be examined \_\_\_\_\_ What means are provided for cleaning their inner surfaces \_\_\_\_\_

Is there a drain arrangement fitted at the lowest part of each receiver \_\_\_\_\_  
High Pressure Air Receivers, No. 1 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 200 liters Internal diameter 374 mm thickness 8 mm  
Seamless, lap welded or riveted longitudinal joint seamless Material 0.4 steel Range of tensile strength 50 kg/mm<sup>2</sup> Working pressure by Rules 42 kg/cm<sup>2</sup>

**ELECTRIC GENERATORS:**—Type Allgemeine Elektrizitäts-Gesellschaft's type A 118 spec.  
Pressure of supply 230 volts. Load 500 Amperes. Direct or Alternating Current D.C.

If alternating current system, state frequency of periods per second \_\_\_\_\_  
Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

Generators, do they comply with the requirements regarding rating yes are they compound wound yes  
are they over compounded 5 per cent. yes, if not compound wound state distance between each generator \_\_\_\_\_

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

PLANS. Are approved plans forwarded herewith for Shafting 26-10-35 Receivers 26-10-35 Separate Tanks yes  
(If not, state date of approval)

**SPARE GEAR**  
Will be supplied as required by the Rules.

The foregoing is a correct description,

Deutsche Werke Kiel Aktiengesellschaft

*[Signature]*  
Manufacturer.



W264-0285

1936  
 Dates of Survey while building { During progress of work in shops - - } Febr: 4, 7, 14, 19, 23, 27, 30  
 { During erection on board vessel - - - } Mar: 3 Apr: 2, 14, 17 May: 5 July: 12 Aug: 3  
 Total No. of visits 11

Dates of Examination of principal parts—Cylinders 4.2.36. Covers 4.2.36. Pistons 17.4.36. Piston rods ✓  
 Connecting rods 2.4.36. Crank and Flywheel shaft 2.4.36. Intermediate shaft ✓  
 Crank and Flywheel shafts, Material O.H. Steel Identification Mark 4405D5  
 Intermediate shafts, Material Identification Marks ✓

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *m.s. Tampa, Ham. Rpt. No. 21829 dated 11-3-36.*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 This auxiliary oil engine generating set has been built under Special Survey in accordance with the Society's Rules, the approved plan and instructions thereto. Material and workmanship are of good quality. In my opinion this generating set is eligible to be placed in the Society's Register Book with notation of +LMC—with date as part of the machinery of the vessel for which intended when it has been satisfactorily fitted on board.

1m.6.31—Transfer. (The Surveyors are requested not to write on or below the space for Committee Minute.)

For all 3 engines  
 The amount of Fee *R.M. £ 920.-* : When applied for, *19.8.1936.*  
 Travelling Expenses (if any) *£ 60.-* : When received, *Sep 11 1936*

*J.A. Mitchell*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 22 DEC 1936  
 Assigned *See Inv. J.E. 12*

FRI 5 MAR 1937  
 FRI 7 MAY 1937  
 FRI 6 AUG 1937

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