

4c.

# REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1103

Received at London Office

30 AUG 1928

of writing Report *16 August, 1928*. When handed in at Local Office *17 August, 1928*. Port of *Bremen/Augsburg*.

in Survey held at *Augsburg*

Date, First Survey *12/4/28*

Last Survey *17<sup>th</sup> August 1928*

Number of Visits *21*

on the *Single*  
*Twin*  
*Triple*  
*Quadruple* Screw vessel

Tons { Gross *—*  
Net *—*

*1928* at *Glasgow*

By whom built *Yarrow & Co., Ltd.*

Yard No. *1559* When built *1928*

Port *Authorities of Buenos Aires*

Port belonging to *Buenos Aires*

Engines made at *Augsburg*

By whom made *Maschinenfabrik Augsburg-Nürnberg*

Contract No. *371970/80* When made *1928*

Generators made at *—*

By whom made *Metropolitan Vickers*

Contract No. *—* When made *1928*

of Sets *2* Engine Brake Horse Power *580* Nom. Horse Power as per Rule *136* Total Capacity of Generators *—* Kilowatts.

ENGINES, &c. Type of Engines *2 H.A. 4-cil Engine, type 96442 or 4 stroke cycle 4* Single or double acting *agl.*

Maximum pressure in cylinders *45 kg/cm<sup>2</sup>* Diameter of cylinders *275 mm* Length of stroke *420 mm* No. of cylinders *12* No. of cranks *2 x 6*

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge *360 mm* Is there a bearing between each crank *yes*

Revolutions per minute *350* Flywheel dia. *1500 mm* Weight *1425 kgs* Means of ignition *Spark plug* Kind of fuel used *Gas oil*

Crank Shaft, dia. of journals *as per Rule* *170 mm* Crank pin dia. *170 mm* Crank Webs *Mid. length breadth 280 mm* Thickness parallel to axis *not*  
*as fitted* *Mid. length thickness 85 mm* Thickness around eyehole *absent*

Intermediate Shafts, diameter *as per Rule* *175 mm* Thickness of cylinder liners *22.5 mm at the top*

Is there 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*

Boiling Water Pumps, No. *1 to each engine* Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Lubricating Oil Pumps, No. and size *1 w/ wheel pump to each engine*

Compressors, No. *—* No. of stages *—* Diameters *—* Stroke *—* Driven by *—*

Exhausting Air Pumps, No. *—* Diameter *—* Stroke *—* Driven by *—*

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*

Are the internal surfaces of the receivers be examined *yes* What means are provided for cleaning their inner surfaces *flanges*

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. *2* Total cubic capacity *800 Liters* Internal diameter *405 mm* thickness *17.5 mm*

Seamless, lap welded or riveted longitudinal joint *permanently* Material *S.A. Steel* Range of tensile strength *42-50 kg/cm<sup>2</sup>* Working pressure by Rules *81.5 kg/cm<sup>2</sup>*

ELECTRIC GENERATORS:—Type *Will be supplied by Messrs. Metropolitan Vickers, Ltd.*

Pressure of supply *—* volts. Load *—* Amperes. Direct or Alternating Current

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

Generators, do they comply with the requirements regarding rating *are they compound wound*

Are they over compounded 5 per cent. *—*, if not compound wound state distance between each generator

Is an adjustable regulating resistance fitted in series with each shunt field *Are all terminals accessible, clearly marked, and furnished with sockets*

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

PLANS. Are approved plans forwarded herewith for Shafting *crank shaft 29/3/28* Receivers *23/3/26* Separate Tanks *—*

## PREPARE GEAR

*1 cylinder power complete with all valves, springs &c. 1 complete set of valves for one cylinder.*  
*4 nozzle heads of fuel valves for each cylinder 1 piston complete with rings & gudgeon pin.*  
*1 set of piston rings in addition. 1 complete set of main shaft wheels for one engine. 1 complete*  
*set of working parts of fuel injection pump. Top and bottom end bolts for 1 connecting rod,*  
*also bearings hereto, 1 main bearing with bolts. 1 set of valves for the cooling and bilge pump.*  
*1 set of cog wheels for the lubricating pumps and all other parts as required by the Society's*  
*Rules.*

The foregoing is a correct description,

**Maschinenfabrik Augsburg-Nürnberg A.G.**

*M. & M. Hermann* *Hoehmann*

Manufacturer.



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Lloyd's Register  
Foundation

W1099-0104



Dates of Survey while building { During progress of work in shops - 1928 April 12, 16 May 4, 7, 18, 21, 22 June 5, 14, 26, 27, 29 July 9, 16, 19, 27, 28 August 3, 9, 17.  
 { During erection on board vessel - - - - -  
 Total No. of visits 21

Dates of Examination of principal parts—Cylinders 20/6/28 26/6/28 Covers 12/4/28 27/6/28 Pistons 5/6/28 Piston rods -  
 Connecting rods 20/6/28 and 29/6/28 Crank and Flywheel shaft 9/7/28 Intermediate shaft -  
 Crank and Flywheel shaft, Material S.A. Steel Identification Mark L.L. 4272 25/4/28 Intermediate shafts, Material - Identification Marks -

Is this machinery duplicate of a previous case no If so, state name of vessel -

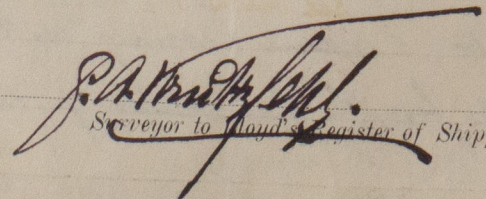
General Remarks (State quality of workmanship, opinions as to class, &c.)

These oil engines of the petrol injection type and their accessories have been constructed in accordance with the approved plans and instructions hereto as well as in compliance with the Society's printed Rules. They have been built under Special Survey. The materials used in the construction and the workmanship are good. The starting air receivers were found to be in conformity with the approved plan. They have been tested to internal hydraulic pressure of 60. lbs. per sq. cm. The engines have been tested on the maker's test bed during several hours under full working conditions and with an overload of 10%. The governors were found to prevent racing of the engines when the whole load was suddenly taken off, the maximum rise of speed being 5% above the normal numbers of revs. per min.

In my opinion the vessel for which these engines are intended will be eligible for the record of + LMC [with date] when the engines and their electric generators are satisfactorily fitted on board and tested under full working conditions.

For identification the cylinder jackets have been stamped:-

No 473 LLODS TEST 6ATM. P.K. 20.6.28 and 26.6.28.

  
 Secretary to Board of Register of Shipping.

The amount of Fee Oil Eng. £ 14 : 16 :  
 Air receivers 1 : 1 :  
 Travelling Expenses (if any) £ 3 : 0 :  
 When applied for, 28.8.1928  
 When received, 19.10.28

Committee's Minute GLASGOW 30 OCT 1928

Assigned See Gls. Rpt. No. 48537

