

Rpt. 4c. **REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.** No. 2130.

Date of writing Report 24th Feb. 1939 When handed in at Local Office 18.2.1939 Port of Bremen  
No. in Survey held at Augsburg Date, First Survey 23rd Nov. 1938 Last Survey 23rd Feb. 1939  
Reg. Book. 88670 on the Single Twinn Triple Quadruple Screw vessel m/v. JAVA Tons { Gross 9250  
Net 5646  
Built at Bremen By whom built Mems. Teschinag Yard No. 951 When built 1939  
Owners Mems. Stoomvaart Mij. Nederland Port belonging to Amsterdam  
Oil Engines made at Augsburg By whom made Mems. M. & U. Contract No. 521410/1420/1430 When made 1938/39  
Generators made at Bremen By whom made Mems. O. & G. Contract No. 533436/37/38 When made 1938  
No. of Sets 3 Engine Brake Horse Power 3x300 Nom. Horse Power as per Rule 3x74 Total Capacity of Generators 3x200 Kilowatts.

**OIL ENGINES, &c.**—Type of Engines 3x96V42 2 or 4 stroke cycle 4 Single or double acting single  
Maximum pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 285 mm Length of stroke 420 mm No. of cylinders 3x6 No. of cranks 3x6  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 352 mm Is there a bearing between each crank yes  
Revolutions per minute 360 Flywheel dia. 1650 mm Weight 1540 kg Means of ignition dis. ign. Kind of fuel used dist. oil on test bed.  
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 shrunk  
as fitted Mid. length thickness 82.5 Thickness around eyehole —  
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thickness of cylinder liners 20 mm  
as fitted 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 water cooled  
Cooling 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 each engine, 2.3 m<sup>3</sup>/h u.s. 720 (driven by same engine).  
Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —  
Scavenging 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  
Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces opening the bottle head  
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 (5265) Total cubic capacity 275 ltr. Internal diameter 416 mm thickness 16 mm  
Seamless, lap welded or riveted longitudinal joint naamloos Material S.M. steel Range of tensile strength 45-55 kg/mm<sup>2</sup> Working pressure by Rules 55 kg/cm<sup>2</sup>

**ELECTRIC GENERATORS:**—Type O. & G. 984/38  
Pressure of supply 250 230 volts. Full Load Current 870 x 3 Amperes. Direct or Alternating Current D.C.  
If alternating current system, state the periodicity — Has the Automatic Governor been tested and found efficient when the whole 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 —  
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 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

**PLANS.** Are approved plans forwarded herewith for Shafting 25th August 1937 Receivers 24th April 1935 Separate Tanks —  
(If not, state date of approval)

**SPARE GEAR** as per Rules.



Dates of Survey while building { During progress of work in shops - 1938. Nov. 23. 24. Dec. 2. 6. 9. 15. 22. 27. 28. 1939 Jan. 3. 5. 6. 7. 9. 10. 11. 12. 14. 16. 17. 18. 19. 20. 23. 24. 25. 27. 28. 30. 31. Feb. 1. 2. 3. 4. 6. 7. 8. 10. 11. 13. 14. 15. 16. 17. 20. 21. 22. 23. }  
 { During erection on board vessel - - - }  
 Total No. of visits 48.

Dates of Examination of principal parts—Cylinders 6/9. 12. 38. 22/37. 12. 38  
 10. 1. 39. Covers 17. 1. 39. Pistons 28. 12. 38 Piston rods "

Connecting rods 5. 1. 39/28. 12. 38 Crank and Flywheel shaft 3rd Jan. / 12th Jan. 1939 Intermediate shaft  
 Lloyd's

Crank and Flywheel shafts, Material S. M. Steel Identification Mark 1/V.S. 1747 24. 9. 38  
 2/V.S. 1749 27. 9. 38

Intermediate shafts, Material ✓ Identification Marks 3/V.S. 1302 15. 9. 38

Is this machinery duplicate of a previous case yes If so, state name of vessel M. V. "Kaandam".

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

These 3 aux. heavy oil engines have been constructed under special survey in accordance with the Society's Rules and Regulations, as well as with the approved plans, and instructions thereto. The material used in the construction is good, and the workmanship satisfactory.

Aux. engine No 521410 has been tested, running under full load and 10% overload during several hours on the makers' test bed in the presence of the undersigned, and was found to work satisfactorily during these trials.

In our opinion, the vessel for which these three aux. engines are intended, will be eligible for the notation of + L. M. C. (with date) when the whole machinery has been fitted satisfactorily on board, and tried under full working conditions.

Identification marks on Air Receiver: No 5266 88195 45. 30 LR 60 atm. V.S. 26. 6. 37.

LLOYD'S TEST

No 2045

60 atm.

H.P. 30 atm.

H.K.S. 7.-1.-39.

These 3 heavy oil engines have been satisfactorily installed on board, tested under full working condition and found in order.

Witness 14th June 1939

A. Carstensen

The amount of Fee RM 1110.00  
 1 x test bed trial 63.00 :  
 1 x air receiver 21.00 :  
 Travelling Expenses (if any) £ 46.00 :  
 When applied for, 3. 3. 1939.  
 When received, 11. 4. 1939.

Witness W. H. Petersen.  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 30 JUN 1939  
 Assigned See FE machy rpt