

Date of writing Report 3. 5. 1937 When handed in at Local Office 5. 5. 1937 Port of Discharge 1 d o r f
 No. in Survey held at Oberursel Date, First Survey 1. 3. 1937. Last Survey 22. 4. 1937.
 Reg. Book. Single on the Twin Screw vessel "Joseph Flint" "A. A. Cowan" Tons Gross Net
 Built at Leith By whom built By Robb (Ld.) (Incorporating Ramage & Ferguson (Ld.)) and No. 242 When built 1937.
 Owners United Africa Co. Ld. Port belonging to
 Oil Engines made at Oberursel By whom made Humboldt-Deutzmotoren A.G. Contract No. 242034 When made 1937.
 Generators made at By whom made Contract No. 242035 When made
 No. of Sets Engine Brake Horse Power 3 x 15 Nom. Horse Power as per Rule 3 x 4 Total Capacity of Generators Kilowatts.

OIL ENGINES, &c.—Type of Engines Heavy Oil Engines A 1 M 317 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 50 kgs/cm² Diameter of cylinders 120 mm Length of stroke 170 mm No. of cylinders 1 No. of cranks 1
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 146 mm, from centre to centre ball bearing Is there a bearing between each crank
 Revolutions per minute 1350 Flywheel dia. 550 mm Weight 210 kgs. Means of ignition dir. inject. Kind of fuel used gas oil on test bed
 Crank Shaft, dia. of journals as per Rule as fitted 65 mm Crank pin dia. 85 mm Crank Webs Mid. length breadth 120 mm Thickness parallel to axis as fitted 37 mm Mid. length thickness 37 mm Thickness around eye hole
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thickness of cylinder liners 22 mm
 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 type Are the exhaust pipes and silencers water cooled or lagged with non-conducting material
 Cooling Water Pumps, No. 1, cog wheel pump Is the sea suction provided with an efficient strainer which can be cleared within the vessel
 Lubricating Oil Pumps, No. and size 1, 150 lts./h
 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
 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.	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.	Total cubic capacity	Internal diameter	thickness
Seamless, lap welded or riveted longitudinal joint	Material	Range of tensile strength	Working pressure by Rules

ELECTRIC GENERATORS:—Type
 Pressure of supply volts. Full Load Current Amperes. Direct or Alternating Current
 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
 Generators, are they compounded as per rule 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
 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
 PLANS. Are approved plans forwarded herewith for Shafting yes, 206 527 A Receivers Separate Tanks
 (If not, state date of approval) 4.5.34.
 SPARE GEAR as required by the Rules

The foregoing is a correct description,
Humboldt-Deutzmotoren
 Aktiengesellschaft
 Manufacturer.



(The Signatures are required to be sent to the Registrar of Companies, London, E.C. 4, 1, Abchurch Lane, and to be filed in the Public Register of Companies.)

Dates $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops} \end{array} \right. \dots 1.3.37., 3.3.37., 13.3.37., 22.4.37.$
 Survey $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel} \end{array} \right. \dots \\
 while building $\left\{ \begin{array}{l} \text{Total No. of visits} \end{array} \right. \dots$$

Dates of Examination of principal parts—Cylinders $22.4.37.$ Liners: $22.4.37.$ Covers: $22.4.37.$ Pistons $22.4.37.$ Piston rods
 Connecting rods $13.3., 1.4., 22.4.37.$ Crank and Flywheel shaft $1.3., 3.3., 22.4.37.$ Intermediate shaft
 Crank and Flywheel shafts, Material **Chrome-Molybdenum** Identification Mark **162 H.B.** Connecting rods: **170 H.B.**
 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 three auxiliary 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 was found to be good and the workmanship satisfactory. The three engines have been tested on Maker's test bed in the presence of the undersigned under full load and overload during several hours and were found working satisfactorily during these trials.

After the trials the auxiliary engines have been opened out for inspection and all parts were found in order.

The main engines for the same vessel will ^{also} be constructed at the works of Messrs. **Humboldt-Deutzmotoren A.G., Köln-Deutz.**

A copy of this report has been forwarded to the Leith Surveyors.

The amount of Fee £	:	When applied for.
	:	19
Travelling Expenses (if any) £	:	When received.
	:	19

R. Macintosh
Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 3 JUN 1938**

Assigned