

Rpt. 4b.
APR 1946

REPORT ON OIL ENGINE MACHINERY.

No. 220

Received at London Office 12 APR 1946

Date of writing Report 22nd. 3. 19 46. When handed in at Local Office 19 Port of Winterthur

No. in Survey held at Winterthur Date, First Survey 1st. 2. 45. Last Survey 5th. 3. 1946.
Reg. Book. Number of Visits 36

kg/c on ~~XXXXXX~~ Single Screw vessel ~~XXXXXX~~ Grebbestroom Tons {Gross..... Net.....}

Built at Goole By whom built Goole S.B. & R.C. L^o Yard No. 459 When built 1946

Engines made at Winterthur By whom made Messrs. Sulzer Bros. Ltd. Engine No. 25432 When made 1945/46.

Donkey Boilers made at NONE By whom made Boiler No. When made

Brake Horse Power 1050 Owners Holland Steamship Co. Port belonging to Amsterdam

Nom. Horse Power as per Rule 246 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines 7 TS 36 SULZER solid injection 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 850 lb/in² Diameter of cylinders 360 mm Length of stroke 600 mm No. of cylinders 7 No. of cranks 7

Mean Indicated Pressure 76 lb/in² Span of bearings, adjacent to the crank, measured from inner edge to inner edge 438 mm Is there a bearing between each crank yes

Revolutions per minute 250 Flywheel dia. 1250 mm Weight 850 kg Means of ignition compression Kind of fuel used heavy fuel oil

Crank Shaft, Solid forged dia. of journals 218 mm as per Rule 218 mm as fitted 240 mm Crank pin dia. 240 mm Crank webs Mid. length breadth 380 mm Mid. length thickness 120 mm Thickness parallel to axis Thickness around eyehole

Flywheel Shaft, diameter 250 mm as per Rule 218 mm as fitted Intermediate Shafts, diameter Thrust Shaft, diameter at collar 250 mm as fitted 174 mm as per Rule

Tube Shaft, diameter Screw Shaft, diameter Is the tube screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes Thickness between bushes Is the after end of the liner made watertight in the propeller boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of tube shaft

If so, state type Length of bearing in Stern Bush next to and supporting propeller

46. Propeller, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet

46. Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced

Thickness of cylinder liners 26 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

water cooled of the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

funnel Cooling Water Pumps, No. 2 D.A. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

100 mm Diam. & 160 mm Stroke Bilge Pumps worked from the Main Engines, No. 1 Diameter 100 mm Stroke 160 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and size How driven

Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

and piston cooling

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 gear-pump 28,8 m³/h

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces In pump room

In holds, &c.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Are the overboard discharges above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks Have they been tested as per Rule

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another

Is the shaft tunnel watertight Is it fitted with a watertight door worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. 1 No. of stages 1 diameters 100 mm stroke 340 mm driven by main engine

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

What provision is made for first charging the air receivers

Scavenging Air Pumps, No. 1 Tandem D.A. diameter 800 mm 700 mm stroke 340 mm driven by main engine

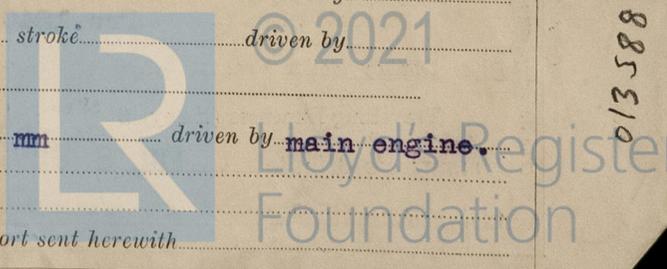
Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

Have the auxiliary engines been constructed under special survey Is a report sent herewith

Handwritten initials and marks.

Handwritten note: "From 18.4.46"

Vertical handwritten number: 013588-013595-0016



4^B

N^o 220.

AIR RECEIVERS:—Have they been made under survey—**Bureau Veritas** survey State No. of report or certificate **71993/B/I 20.12.38**
 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 and cleaned **yes** ✓ Is a drain fitted at the lowest part of each receiver **yes** ✓
 Injection 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. 4 ✓ Total cubic capacity **2000 litres** Internal diameter **478 mm** thickness **15 mm** Actual _____
 Seamless, lap welded or riveted longitudinal joint **seamless** Material **S.M Steel** Range of tensile strength **55-61.3** Working pressure by Rules **61 kg** Actual **30 kg**

IS A DONKEY BOILER FITTED _____ If so, is a report now forwarded _____
 Is the donkey boiler intended to be used for domestic purposes only _____
PLANS. Are approved plans forwarded herewith for shafting **769830-1 approved 21.8.45** ✓ **Dr. Mannesmann**
 (If not, state date of approval) **805872 approved 21.8.45** ✓ **19085 a.** Separate fuel tanks.
 Donkey boilers _____ General pumping arrangements _____ Pumping arrangements in machinery space **Approved Lloyds letter 17.8.**
 Oil fuel burning arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied **yes, please see list** ✓
 State the principal additional spare gear supplied _____

Sulzer Brothers Limited

The foregoing is a correct description, **Steiger** Manufacturer.

Dates of Survey while building
 During progress of work in shops - - **1.2.45 to 5.3.46.**
 During erection on board vessel - - -
 Total No. of visits _____

Dates of examination of principal parts—Cylinders **13.8.45** Covers **19.9.45** Pistons **21.3.45** Rods _____ Connecting rods **12.12.45**
 Crank shaft **26.6.45.** Flywheel shaft **25.6.45.** Thrust shaft **25.6.45.** Intermediate shafts _____ Tube shaft _____
 Screw shaft _____ Propeller _____ Stern tube _____ Engine seatings _____ Engine holding down bolts _____
 Completion of fitting sea connections _____ Completion of pumping arrangements _____ Engines tried under working conditions _____
 Crank shaft, material **S.M. Steel** Identification mark **LR 6316** ✓ Flywheel shaft, material **S.M. Steel** Identification mark **6316** ✓
 Thrust shaft, material **S.M. Steel** Identification mark **LR 6316** ✓ Intermediate shafts, material _____ Identification marks _____
 Tube shaft, material _____ Identification mark _____ Screw shaft, material _____ Identification mark _____

Identification marks on air receivers **Ch.108717**
 Nos. **5 16 19 20** *Bureau Veritas*
Betr. Dr. 40 ATM.
Pr. Dr. 80 ATM.
17.12.38.

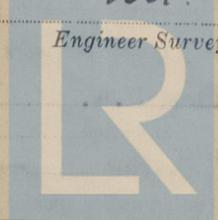
Is the flash point of the oil to be used over 150°F _____
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with _____
 Description of fire extinguishing apparatus fitted _____
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo _____ If so, have the requirements of the Rules been complied with _____
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with _____
 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.)
This engine has been constructed under survey in accordance with the requirements of the Rules, the Secretary's letters and the approved plans. Materials and workmanship are good.

The torsional characteristics of the engine and fly wheel system have been satisfactorily examined. (See Secy's letter 23.8.45) to which there is reference.

The amount of Entry Fee ... **Frs. 100.-**
 Special ... **Frs. 1540.-**
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ : :
 When applied for 19
 When received 19

Committee's Minute **FRI. 6 DEC 1946**
 Assigned **See F.E. mehy rpt.**

M. de Fey
 Engineer Surveyor to Lloyd's Register of Shipping.

 Lloyd's Register Foundation

Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)