

Order No. 754249.

pt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 61.

Received at London Office 30 MAR 1931

Date of writing Report February 21. When handed in at Local Office

Port of DUSSELDORF

in Survey held at

Date, First Survey 8. I. 1931

Last Survey 4. II. 1931

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

Tons ^{Gross} ~~Net~~

built at

By whom built Y. Guitt & Son

Yard No. 45 When built

engines made at

By whom made Humboldt-Reithmotaoren A. G.

Engine No. 133 When made 1931

Boilers made at

By whom made

Boiler No. When made

Horse Power 330

Owners Y. Guitt

Port belonging to Groningen

Horse Power as per Rule 70

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

for which vessel is intended

ENGINES, &c.—Type of Engines *Heavy Oil Engine 4. V. H. S. 150* 2 or 4 stroke cycle *Single or double acting*

Working pressure in cylinders *40 kg. p. sq. cm.* Diameter of cylinders *280 mm* Length of stroke *500 mm* No. of cylinders *six* No. of cranks *six*

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge *333 mm* Is there a bearing between each crank *yes*

Revolutions per minute *300* Flywheel dia. *1220 mm* Weight *2200 kg.* Means of ignition *fuel spray* Kind of fuel used *oil*

Shaft, dia. of journals *as per Rule* Crank pin dia. *140 mm* Crank Webs *Mid. length breadth 280 mm* Thickness parallel to axis *as per Rule*

Propeller Shaft, diameter *as per Rule* Intermediate Shafts, diameter *as per Rule* Thrust Shaft, diameter at collars *as per Rule*

Shaft, diameter *as per Rule* Screw Shaft, diameter *as per Rule* Is the ^{tube} ~~screw~~ shaft fitted with a continuous liner *yes*

Liners, thickness in way of bushes *as per Rule* Thickness between bushes *as per Rule* Is the after end of the liner made watertight in the stern tube *yes*

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

Does 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 *yes*

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

If so, state type *oil gland* Length of Bearing in Stern Bush next to and supporting propeller *19 1/16*

Propeller, dia. *1220 mm* Pitch *100 mm* No. of blades *4* Material *cast iron* whether Moveable *no* Total Developed Surface *120 sq. feet*

Means of reversing Engines *by cam shafts* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication *oil*

Thickness of cylinder liners *2.3 mm* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged with insulating material *water cooled*

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

Water Pumps, No. *One* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *yes*

Pumps worked from the Main Engines, No. *One* Diameter *130 mm* Stroke *68 mm* Can one be overhauled while the other is at work *yes*

connected to the Main Bilge Line { No. and Size *One* How driven *by main engine*

Lubricating Oil Pumps, including Spare Pump, No. and size *one tooth wheel pump and one spare pump*

Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge *yes*

In Machinery Spaces *yes* In Pulp Room *no*

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *one*

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* Are the Bilge Suctions in the Machinery Spaces easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *yes*

Sea Connections fitted direct on the skin of the ship *yes* Are they fitted with Valves or Cocks *yes*

Are the Overboard Discharges above or below the deep water line *yes*

Are the Blow Off Cocks fitted with a spigot and brass covering plate *yes*

How are they protected *by platform*

Have they been tested as per Rule *yes*

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*

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 *yes*

Is the Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *main engine*

Means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *yes*

Air Compressors, No. *One* No. of stages *two* Diameters *130 x 150 mm* Stroke *100 mm* Driven by *main engine*

Auxiliary Air Compressors, No. *no* No. of stages *no* Diameters *no* Stroke *no* Driven by *no*

Air Pumps, No. *no* Diameter *no* Stroke *no* Driven by *no*

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

Internal surfaces of the receivers be examined and cleaned *yes* Is a drain fitted at the lowest part of each receiver *yes*

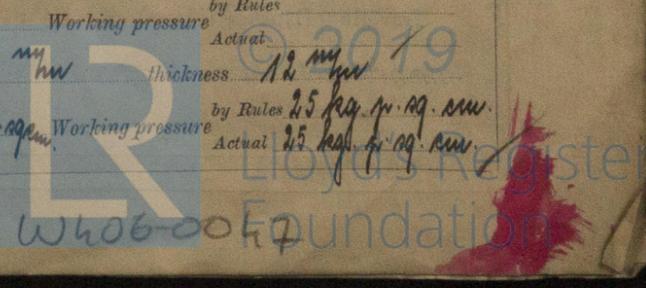
Pressure Air Receivers, No. *Three* Cubic capacity of each *500 liters each* Internal diameter *450 mm* thickness *12 mm*

Material *laminated mild steel* Range of tensile strength *38.2 kg. p. sq. cm.* Working pressure *2.5 kg. p. sq. cm.*

Actual Working pressure *2.5 kg. p. sq. cm.*

Working pressure by Rules *2.5 kg. p. sq. cm.* Actual *2.5 kg. p. sq. cm.*

Working pressure by Rules *2.5 kg. p. sq. cm.* Actual *2.5 kg. p. sq. cm.*



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 18. II. 1927.
(If not, state date of approval)

Receivers 13. 12. 1927. Separate Tanks 5. IV. 1928.

Donkey Boilers..... General Pumping Arrangements..... Oil Fuel Burning Arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
State the principal additional spare gear supplied as ordered by the owner.

The foregoing is a correct description,

Humboldt-Deutzmotoren

[Signature] Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 24. I. 30. ; 8. I. 31. ; 2. II. 1931. and 7. II. 1931.
{ During erection on board vessel - - - }
{ Total No. of visits } Four.

Dates of Examination of principal parts—Cylinders 8. I. 31. Covers 8. I. 31. Pistons 8. I. 31. Rods..... Connecting rods 7. II. 31.

Crank shaft 8. I. 31. Flywheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft.....
Screw shaft..... Propeller..... Stern tube..... Engine seatings..... Engines holding down bolts.....

Completion of filling sea connections..... Completion of pumping arrangements..... Engines tried under working conditions.....
Crank shaft, Material 4. 46. Steel Identification Mark 14255K. 26. 24/10. 30. Flywheel shaft, Material..... Identification Mark.....
Thrust shaft, Material..... Identification Mark..... Intermediate shafts, Material..... Identification Marks.....
Tube shaft, Material..... Identification Mark..... Screw shaft, Material..... Identification Mark.....

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.....
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 yes If so, state name of vessel see Disseld. Report 46. 45. 7 of 19.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines are built in accordance with the approved plans and the requirements embodied in the Secretary's letters of 4th November and 13th December 1927 and otherwise in accordance with the requirements of the Rules. Materials and workmanship are of best quality, the outfit is simple and engines have tested under full working and manoeuvring conditions for about 200 hours in the trial stage in machine shop and had given full satisfaction. At trial all working parts have been opened up and were found on examination in good condition. This machinery has been built under special survey and will be fitted on board the vessel No. 45. Hecora. J. Gmit & Zoon, Fochol. In my opinion this machinery is eligible for notation of FE. 2. 31.

The amount of Entry Fee .. £	2 : 0 :	When applied for, <u>2. Mar. 1931.</u>
Special	£ 23 : 15 :	
Donkey Boiler Fee	£ : : :	When received, <u>26th Mar. 1931.</u>
Travelling Expenses (if any) £	3 : 5 :	

Committee's Minute FRI. 24 JUL 1931
Assigned Sec. F. G. Rpl.

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping

FRI. 8 JAN 1932
TUE. 26 JAN 1932



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