

REPORT ON OIL ENGINE MACHINERY.

No. 19479

Received at London Office

18 AUG 1930

Date of writing Report 8th August 1930 When handed in at Local Office

Port of Hamburg

No. in Survey held at Hamburg

Date, First Survey 13th March, 1920 Last Survey 3rd July, 1930

Reg. Book.

Number of Visits 20

Single
on the Twin
Triple
Quadruple

Screw vessel

"VIGRID"

Tons { Gross 7356.19
Net 4366.86

Built at Hamburg

By whom built Deutsche Werft A.-G.

Yard No. 141 When built 1930

Engines made at Augsburg

By whom made Maschinenfabrik Augsburg-Münch. A.-G. Engine No. 30410 When made 1930

Donkey Boilers made at Hamburg

By whom made Deutsche Werft A.-G.

Boilers No. 387/90 When made 1930

Brake Horse Power 2650

Owners Skibsaktieselskabet "Vigrid",

Port belonging to Tønsberg

Nom. Horse Power as per Rule 980

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

Trade for which vessel is intended Carrying Petroleum in Bulk

OIL ENGINES, &c.—Type of Engines M.A.N. Diesel Engine, type D57u 60/90 2 or 4 stroke cycle 2 Single or double acting double

Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 5 No. of cranks 5

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 885 mm Is there a bearing between each crank yes

Revolutions per minute 115 Flywheel dia. 2100 mm Weight 3400 kg. Means of ignition Diesel principle solid inj. Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 420 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 560 mm Thickness parallel to axis shrunk Thickness around eye-hole

Flywheel Shaft, diameter as per Rule 420 mm Intermediate Shafts, diameter as per Rule 294 mm Thrust Shaft, diameter at collars as per Rule 400 mm

Tube Shaft, diameter as per Rule 318 mm Screw Shaft, diameter as per Rule 318 mm Is the shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 12.6 mm Thickness between bushes as per Rule 15 mm Is the after end of the liner made watertight in the

propeller boss yes 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 the tube shaft Length of Bearing in Stern Bush next to and supporting propeller 1390 mm

Propeller, dia. 4400 mm Pitch 3480 mm No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 5486 m² sq. feet

Method of reversing Direct by means of compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Thickness of cylinder liners 80/75 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and water cooled or lagged with

Cooling Water Pumps, No. 2, each of 180 m³/hr capacity Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 120 mm Stroke 120 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line No. and Size Mach. Space: Bilge pump 120 m³/hr, Bilge & Sanit. pump 40 m³/hr Fore ship: Bilge pump 35 m³/hr

How driven electrically Are two independent means arranged for circulating water through the Oil Cooler yes

Pumps, No. and size:—In Machinery Spaces 6 x 90 mm φ, 1 x 150 mm φ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

in Holds, &c. none in fore ship: 2 x 100.5 mm φ, 4 x 88.5 mm φ

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 x 150 mm φ

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

d from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks valves and cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What pipes pass through the bunkers none How are they protected

What pipes pass through the deep tanks none cargo lines Have they been tested as per Rule yes

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

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

apartment to another yes Is the Shaft Tunnel watertight mach. aft. Is it fitted with a watertight door worked from

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. solid injection No. of stages 2 Diameters 700/220 mm Stroke 200 mm Driven by elect. motors

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 100/45 mm Stroke 100 mm Driven by hand worked

Small Auxiliary Air Compressors, No. 2 Diameters 38/59 mm Stroke 60 mm Driven by main crank shaft

Savenging Air Pumps, No. 2 Diameter 1380 mm

Auxiliary Engines crank shafts, diameter as per Rule 130 mm

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. 1 for aux. mach. Cubic capacity of each 0.125 m³ Internal diameter 405 mm thickness 17.5 mmSeamless, lap welded or riveted longitudinal joint seamless Material S.M. Steel Range of tensile strength 44-60 kg/mm² Working pressure by Rules 30 kg/mm²Working Air Receivers, No. 2 Total cubic capacity 20 m³ Internal diameter 1900 mm thickness of shell 25 mmSeamless, lap welded or riveted longitudinal joint yes Material S.M. Steel Range of tensile strength 41-45 kg/mm² Working pressure by Rules 26.5 kg/mm²

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

PLANS. Are approved plans forwarded herewith for Shafting *11/4/30, 17/2/30*
(If not, state date of approval)

Receivers *18/2/30*

Separate Tanks *28/5/30*

Donkey Boilers *18/11/29*

General Pumping Arrangements *12/12/30*

Oil Fuel Burning Arrangements *18/6/30*

SPARE GEAR *as per Rules.*

The foregoing is a correct description,

Manufacturer.

DEUTSCHE WERFT
AG. KÖLN

Paul J. J. Kleinhorn

Dates of Survey while building
During progress of work in shops - *47*
During erection on board vessel - *1930: 1/3/30, 11-24/4, 5-10-16-22-24/8, 6-17-21-26-30/6, 3-7-10-16-18-21-30/7-31/7/30.*
Total No. of visits *47 + 20 = 67*

Dates of Examination of principal parts—Cylinders *25/4/30* Liners *12/4/30* Covers *16/4/30* Pistons *10/4/30* Rods *10/4/30* Connecting rods *11/4/30*

Crank shaft *12/4/30* Flywheel shaft *12/8/30* Thrust shaft *10/6/30* Intermediate shafts *3/6/30* Tube shaft ***

Screw shaft *3/6/30* Propeller *6/6/30* Stern tube *10/5/30* Engine seatings *3/6/30* Engines holding down bolts *10/7/30*

Completion of fitting sea connections *6/6/30* Completion of pumping arrangements *21/6/30* Engines tried under working conditions *31/7/30*

Crank shaft, Material *S.M. Steel* Identification Mark *M.K. 3052 14/2/30* Flywheel shaft, Material *S.M. Steel* Identification Mark *A.S. 239 28/2/30*

Thrust shaft, Material *S.M. Steel* Identification Mark *F.S. 230 25/3/30* Intermediate shafts, Material *S.M. Steel* Identification Marks *36. 7437 31/3/30*

Tube shaft, Material *** Identification Mark *** Screw shaft, Material *LLOYDS 443824 31/3/30* Identification Mark *S.M. Steel*

Is the flash point of the oil to be used over 150° F. *yes*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *yes*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *oil tanker* If so, have the requirements of the Rules 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.)

Material and workmanship of this machinery are of good quality and the outfit is complete. The materials used in the construction are made at works recognized by the Committee and tested in accordance with the Rules. The machinery has been built under Special Survey in accordance with approved plans, the Secretary's letters and otherwise in compliance with the Society's requirements. It has given full satisfaction under full working and manoeuvring conditions during a 24 hours trial trip and is eligible in my opinion for notification of LMC-7.30, Oil Engines, Tail Shaft etc.

It is submitted that this vessel is eligible for THE RECORD. *+ LMC 7.30.*

*oil engines 2 SC
5 cy 2 1/2 - 3 5/16
200 170 lb
W.D. 21*

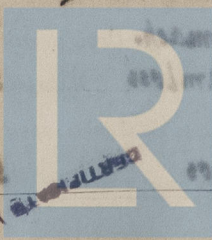
The amount of Entry Fee ... £ 1 : 4 : - When applied for,
1/5 Special ... £ 24 : 16 : - 12. 1. 19. 30
Donkey Boiler Fee ... £ 15 : 16 : - When received,
Travelling Expenses (if any) £ 5 : 2 : - 16. 10. 30
2 Air Receivers £ 2 : 8 : -
Committee's Minute

Assigned

*+ L. MC 7.30
200 170 lb.*

Oil Eng.

C.L. William



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Foundation