

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 20926

6 OCT 1933

Received at London Office

Date of writing Report 30<sup>th</sup> Sept 1933 When handed in at Local Office

Port of Hamburg

No. in Survey held at Hamburg  
Reg. Book.Date, First Survey 27<sup>th</sup> October 1932 Last Survey 21<sup>st</sup> Sept. 1933

Number of Visits 28

on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel

D.L. Harper (Oil engine)

Tons { Gross 72336.  
Net 7020.

Built at Hamburg By whom built Deutsche Werft A.G. Yard No. 149 When built 1933  
Engines made at Augsburg By whom made M. A. N. Engine No. 330829 When made 1932/33.  
Donkey Boilers made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 47980 When made 1933.  
Brake Horse Power 2 x 2250 Owners Balt. amerik. Petroleum Import Ges. Port belonging to Danzig  
Nom. Horse Power as per Rule 783 <sup>1500</sup> Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes.  
Trade for which vessel is intended Tanker Service

**OIL ENGINES, &c.**—Type of Engines D 4 zu 60/90 23 5/8" 2 or 4 stroke cycle 2 Single or double acting double  
Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 4 8 No. of cranks 4  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 852 mm Is there a bearing between each crank yes.  
Revolutions per minute 118 Flywheel dia. 2100 Weight 7500 kg Means of ignition airless ign. Kind of fuel used amerik. gas oil.  
Crank Shaft, dia. of journals as per Rule as approved Crank pin dia. 390 mm Crank Webs Mid. length breadth 640 mm Thickness parallel to axis 177.5 mm  
as fitted 390 mm Mid. length thickness 240 mm Thickness around eyehole 240.0 mm  
Flywheel Shaft, diameter as per Rule as approved Intermediate Shafts, diameter as per Rule as approved Thrust Shaft, diameter at collars as per Rule as approved  
as fitted shrunk 446 mm as fitted 380 mm  
Tube Shaft, diameter as per Rule as approved Screw Shaft, diameter as per Rule as approved Is the { tube } shaft fitted with a continuous liner {  
as fitted 400 mm as fitted yes  
Bronze Liners, thickness in way of bushes as per Rule as approved Thickness between bushes as per Rule as approved 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 70 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1955.  
Propeller, dia. 4250 mm Pitch 3500 mm No. of blades 4 Material bronze whether Moveable moveable Total Developed Surface 4,154 m<sup>2</sup> sq. feet  
Method of reversing Engines 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  
forced Thickness of cylinder liners 42.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with  
non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine.  
Cooling Water Pumps, No. 7 each main eng. 3 x 2 1/2 200; 7 driven by steam 240/320/350  $\phi$  Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
driven by gear gear.  
Bilge Pumps worked from the Main Engines, No. 7, each Diameter 215 mm Stroke 200 mm Can one be overhauled while the other is at work yes  
Pumps connected to the Main Bilge Line No. and Size 3; 2 x 275/2000 i l; 210/300  $\phi$  1, driven by steam, 130/150/300  $\phi$   
Cargo. How driven 2 from main eng. 1 by steam. 1, driven by steam, 130/150/300  $\phi$   
Bilge Pumps, No. and size 2, 360 540 Tandem. 320/220 Lubricating Oil Pumps, including Spare Pump, No. and size 3, 2 x driven from main eng. 20 m<sup>3</sup>/h.  
3, 380 560  $\phi$  7 by steam 170/200/525  $\phi$  40 m<sup>3</sup>/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 7, 540  $\phi$ , 2 60  $\phi$ ; 3 80  $\phi$ ; 3 80  $\phi$ ; 2 70  $\phi$ ; 2 70  $\phi$ ; 1 70  $\phi$ .  
Cofferdams In Holds, &c. frame 47 x 2 60  $\phi$ ; frame 49/50 = 1 125  $\phi$ ; Cofferd. round about Lubricating oil tank 2 290  $\phi$   
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1, 125  $\phi$ ; 160/210/300; 1, 175  $\phi$ ; 1 driven by steam 1320/350.  
Are all the Bilge Suction pipes in Holds and Tanker Well fitted with strum-boxes yes Are the Bilge Suctions 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 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 fuel oil Bilge line from Cofferdam How are they protected.  
What pipes pass through the cargo tanks cargo lines only (heating coils for deck) 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  
compartment to another yes Is the Shaft Tunnel watertight mach. aft. 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 2 Diameters 280/245  $\phi$  Stroke 330 mm Driven by steam engine  
Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 180/70  $\phi$  Stroke 120 mm Driven by steam engine  
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 180/70  $\phi$  Stroke 120 mm Driven by steam engine  
Scavenging Air Pumps, No. 7 each main engine Diameter 2 x 1080 mm Tand. Stroke 760 mm Driven by main engine.  
Auxiliary Engines crank shafts, diameter as per Rule Makers Type of Standard Auxiliary Steam Engine.  
as fitted 75 mm  $\phi$  and 85 mm  $\phi$ .

**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 manholes + doors.

Is there a drain arrangement fitted at the lowest part of each receiver yes.

Air whistle High Pressure Air Receivers, No. 7 one Cubic capacity of each 7.720 m<sup>3</sup> Internal diameter 800 mm thickness 10 mmSeamless, lap welded or riveted longitudinal joints yes, double butt Material 0.4 Steel Range of tensile strength 41/47 kg/mm<sup>2</sup> Working pressure by Rules 70, 9 kg/cm<sup>2</sup>Starting Air Receivers, No. 2 Total cubic capacity 2 x 18 = 36 m<sup>3</sup> Internal diameter 7900 mm thickness 25 + 25.5 mmSeamless, lap welded or riveted longitudinal joints yes, double butt Material 0.4 Steel Range of tensile strength 41/47 kg/mm<sup>2</sup> Working pressure by Rules 26, 5 kg/cm<sup>2</sup>

002442-002448-0046



IS A DONKEY BOILER FITTED? yes

PLANS. Are approved plans forwarded herewith for Shafting yes  
(If not, state date of approval)

If so, is a report now forwarded? yes

Donkey Boilers yes

Receivers yes

Separate Tanks yes

General Pumping Arrangements yes

Oil Fuel Burning Arrangements yes

### SPARE GEAR

All spare parts as required by the Rules have been supplied and a number of parts in addition.

The foregoing is a correct description,

**DEUTSCHE WERFT  
AG**  
KÖLN

3.10.1933.

Manufacturer.

Dates of Survey while building  
During progress of work in shops -  
During erection on board vessel -  
Total No. of visits 28  
Please see Augsburg Report No 1533 dated 8<sup>th</sup> March 1933 (710)

Dates of Examination of principal parts—Cylinders see Augb. R. Covers see Augb. R. Pistons Augb. Rep Rods Augb. Rep Connecting rods Augb. Rep  
Crank shaft Augb. Report Thrust shaft 27/10/32 Intermediate shafts 27/10/32 Tube shaft 1/11/32  
Screw shaft 10/11/32 Propeller 10/12/32 Stern tube 22/11/32 Engine seatings 27/10/32 Engines holding down bolts 2/6/33  
Completion of fitting sea connections 10/12/32 Completion of pumping arrangements 16/9/33 Engines tried under working conditions 2-6/9/33

Crank shaft, Material O.H. Steel Identification Mark FS. 1530/31/32/33 Flywheel shaft, Material O.H. Steel Identification Mark see Thrust  
Thrust shaft, Material O.H. Steel Identification Mark FS. 1530/31/32/33 Intermediate shafts, Material O.H. Steel Identification Marks 7350/31 FS. 15.4.32  
Tube shaft, Material — Identification Mark — Screw shaft, Material O.H. Steel Identification Mark 1353

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 Tanker

If so, have the requirements of the Rules been complied with yes

Is this machinery duplicate of a previous case yes If so, state name of vessel No 748, "Franz Klasen"

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

Material and workmanship of this Oil Engine Machinery are of good quality and the outfit is ample. The material 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 compliance with the approved plans, the Secretary's letters and instructions thereto and otherwise in conformity with the Society's Requirements. It has given full satisfaction under working and manoeuvring conditions during a 12 hours trial trip and is eligible in my opinion for notification of:—

**+ L.M.C.-9,33. Oil Engines. Tail Shaft (C.L.) Mach. aft.**

The amount of Entry Fee £ 1 : 4 : 0 When applied for, 19  
Special £ 27 : 16 : 7 When received, 31.10.19.33  
Donkey Boiler Fee £ :  
Travelling Expenses (if any) £ 17 : 6 : 5

Committee's Minute

FRI. 13 OCT 1933

Assigned

+ L.M.C. 9.33 C.L.

4 DB. 200 lb.

*M. H. Schneider*

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation