

REPORT ON OIL ENGINE MACHINERY.

No. 22091

Received at London Office 13 NOV 1936

Date of writing Report 7th Novemb. 1936 When handed in at Local Office

Port of Hamburg

No. in Survey held at Hamburg + Augsburg Date, First Survey 23-4-1936 Last Survey 22nd Oct. 1936
Reg. Book. Number of Visits 25

on the Single Twin Triple Quadruple Screw vessel

"Regulus"

Tons { Gross 10290
Net 7621

Built at Hamburg By whom built Messrs. Deutsche Werft A.G. Yard No. 182 When built 1936
Engines made at Augsburg By whom made Messrs. Maschinenf. Augsburg - Nürnberg Engine No. 691/120 When made 1936
Donkey Boilers made at Hamburg By whom made Messrs. Deutsche Werft A.G. Boiler No. 550+551 When made 1936
Brake Horse Power 4100 Owners Trelleborgs Angfartygs Nya Aktiebolag Port belonging to Trelleborg
Nom. Horse Power as per Rule 1167 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 6 zu 60/110. 735/8 437/16 2 or 4 stroke cycle 2 Single or double acting double
Maximum pressure in cylinders 45 Atm. Diameter of cylinders 600 mm Length of stroke 1100 mm No. of cylinders 6 No. of cranks 6
Mean Indic. Pressure: 5.3 " Is there a bearing between each crank yes
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 895 mm
Revolutions per minute 116 Flywheel dia. 2100 mm Weight 3490 kg. Means of ignition dir. inject 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 710 mm Thickness parallel to axis 265 mm.
as fitted 420 mm Mid. length thickness 265 mm Thickness around eye-hole 185 mm.
Flywheel Shaft, diameter as per Rule 440 mm Intermediate Shafts, diameter as per Rule 341 mm Thrust Shaft, diameter at collars as per Rule 358.5 mm.
as fitted 440 mm as fitted 385 mm as fitted 400 mm.
Tube Shaft, diameter as per Rule 374.5 mm. Is the tube shaft fitted with a continuous liner yes
as fitted 388 mm as fitted 388 mm
Bronze Liners, thickness in way of bushes as per Rule 19 mm. Thickness between bushes as per rule 14 mm. Is the after end of the liner made watertight in the
as fitted 22 " as fitted 16 " 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 yes
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 yes
If two 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
shaft yes If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 1600 mm.

Propeller, dia. 4800 mm Pitch 3400 mm No. of blades 4 Material Bronze whether Moveable yes Total Developed Surface 7.028 sq. feet m.
Method of reversing Engines direct by compr. Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced
Thickness of cylinder liners 40 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 yes
Cooling Water Pumps, No. 4 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
What special arrangements are made for dealing with cooling water if discharged into bilges yes

Bilge Pumps worked from the Main Engines, No. 1 Diameter 100 mm Stroke 100 mm Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line No. and Size: Bilge pump = 75 m³/h. ; Ballast pump = 250 m³/h. How driven steam driven ; steam driven.
Ballast Pumps, No. and size 1 ; 250 m³/h. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 ; 1. driven fr. main Eng. 40 m³/h ; 2. steam driven. 45 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 14 ; 1 direct = 125 φ ; 6 of 90 φ ; 3 boiler space = 50 φ ; 150 φ ; 1 Eng. well = 90 φ ; 2 oil gutter = 50 φ ; 4 of 90 φ Main Pump Room 11. 1 of 65 φ in Form. P.R. ; 1 of 70 φ ; 1 of 125 φ ; Frame 31/32 = 1 of 70 φ ; Frame 49/50 = 1 of 125 φ ; 27/25 = 1" 70 φ ; " 9/11 = 1" 50 φ ; one Ballast pump = 150 φ ; one Bilge pump = 125 φ

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 ; one Bilge pump = 125 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 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 Sea water chests welded to ship skin. Are they fitted with Valves or Cocks yes
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 oil Suction Pipe from Cofferd. Frame 49/50. How are they protected strong galvanized steel tube.
What pipes pass through the cargo tanks heating coils and cargo pipe 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 compartment to another yes Is the Shaft Tunnel watertight Mach. aft. Is it fitted with a watertight door yes worked from yes
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Main Air Compressors, No. 1 No. of stages 2 Diameters 24 P. each 260 mm φ Stroke 220 mm Driven by steam engine
Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 24 P. " 100 " Stroke 220 mm Driven by Diesel Engine
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 150/55 mm φ Stroke 110 " Driven by Diesel Engine
Scavenging Air Pumps, No. 1 reciprocating Diameter 1380 mm Stroke 850 mm Driven by Main Engine.
Auxiliary Engines crank shafts, diameter as per Rule Makers Standard Type No. 4 Position auxil. steam compr. port side forward ; Diesel Engine driv. compressor and generator and steam Eng. driv. generator all port side ; Boiler fan = Boiler space. Hand driven
Electr. steam Eng. 100 mm φ Boiler fan 50 mm φ Diesel Eng. 75 mm φ its bore at 100 mm φ

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 and cleaned yes Is a drain fitted at the lowest part of each receiver yes
High Pressure Air Receivers, No. 1 Cubic capacity of each 12 m³ each Internal diameter 1750 mm thickness 23.5 mm
Seamless, lap welded or riveted longitudinal joint riveted Material S.M. Steel Range of tensile strength 44/50 kg/mm² Working pressure 24.8 kg/cm²
Starting Air Receivers, No. 2 Total cubic capacity 12 m³ each Internal diameter 1750 mm thickness 23.5 mm
Seamless, lap welded or riveted longitudinal joint riveted Material S.M. Steel Range of tensile strength 44/50 kg/mm² Working pressure 25.0 kg/cm²

IS A DONKEY BOILER FITTED?

yes ✓

If so, is a report now forwarded? yes

Is the donkey boiler intended to be used for domestic purposes only ✓

PLANS. Are approved plans forwarded herewith for Shafting 27-3-35 Receivers 30-11-34. Separate Tanks 25/35, 25/34, 4/6/35
Donkey Boilers 28/4/35; 4/4/35 General Pumping Arrangements 31/1/36 Oil Fuel Burning Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes ✓

State the principal additional spare gear supplied

The foregoing is a correct description.

DEUTSCHE WERFT

AKTIENGESELLSCHAFT

7/11/36 Manufacturer.

Dates of Survey while building { During progress of work in shops - - Please see Augsburg Report dated 26th July 1936 + 23/4/36; 22/5/36; 25/5/36; 29/7/36
During erection on board vessel - - 8/6/36; 27/7/36; 17-18-21-25-27/8/36; 1-11-14-16-21-24-30/9/36; 6-9-12-15-19-22/10/36.
Total No. of visits 25.

Dates of Examination of principal parts—Cylinders Augsburg Rep. Covers Augsburg Rep. Pistons Augsburg Rep. Rods Augsburg Rep. Connecting rods Augsburg Rep.
Crank shaft Augsburg Rep. Flywheel shaft Augsburg Rep. Thrust shaft 25/5/36; 27/7/36 Intermediate shafts 25/5/36; 29/7/36 Tube shaft
Screw shaft 25/5/36; 29/7/36 Propeller 22/5/36; 27/8/36 Stern tube 19/8/36; 21/8/36 Engine seatings 1/9/36; 11/9/36 Engines holding down bolts 1/9/36 + 11/9/36
Completion of fitting sea connections 27-8-36 Completion of pumping arrangements 9-10-36 Engines tried under working conditions 9+12/10/36.
Crank shaft, Material S.M. Steel Lloyd's Identification Mark K.H. 16329 28/5/36 Flywheel shaft, Material S.M. Steel Lloyd's Identification Mark J.O. 5179 27/3/36.
Thrust shaft, Material S.M. Steel Lloyd's Identification Mark J.O. 5074 27/2/36 Intermediate shafts, Material S.M. Steel Lloyd's Identification Marks H.B. 5075 27/2/36.
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S.M. Steel Identification Mark J.O. 5073 27/2/36.
Is the flash point of the oil to be used over 150° F. yes Spare = H.B. 287 21/2/34.

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 ✓ 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 Ms. Marina; Ms. Tharpeimer; Ms. Narlys.

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under special survey in compliance with the approved plans, the Secretary's letters and instructions thereto and other wise in conformity with the Society's Requirements. The material used in the construction are of good quality and made at works recognized by the Committee and tested by the Society's Surveyors. The outfit is ample. It has given full satisfaction under working and manœuvring condition during a 12 hours trial trip and is eligible in my opinion for notation of + U.M.C. (with date) Oil Engine; Tail Shaft (C.W). Mach. aft.

The amount of Entry Fee (15) £ 24.00 : When applied for, 9th Nov. 1936.
Special ... (15) £ 516.70 :
Donkey Boiler Fee ... £ 500.00 :
2 Spare Air Receivers ... £ 168.00 :
Travelling Expenses (if any) £ 71.30 :
When received, 10.12.36

McCluskey
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned Junc 10 36
C.L. 3 D.B. 190 lb.
oil engines

