

## REPORT ON OIL ENGINE MACHINERY.

No. 22829

Received at London Office

Date of writing Report 5<sup>th</sup> July 1938 When handed in at Local Office 19 Port of HAMBURG JUL 11 1938  
 No. in Survey held at HAMBURG and Mannheim Date, First Survey 28<sup>th</sup> April Last Survey 21<sup>st</sup> June 1938  
 Reg. Book. 11 Number of Visits 11

on the Single  
Triple  
Quadruple Screw vessel

**GOLDFINDE.**

Tons { Gross  
 Net

Built at Hamburg - Harburg By whom built G. Renck Lun. K.G. Yard No. 636 When built 1938  
 Engines made at Mannheim By whom made Motorenwerke Mannheim A.G. Engine No. 39474 When made 1938  
 Donkey Boilers made at - By whom made - Boiler No. - When made -  
 Brake Horse Power 250 Owners A/S Nortrade Port belonging to Trondhjem  
 Nom. Horse Power as per Rule 64 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which vessel is intended General trade

IL ENGINES, &c.—Type of Engines Heavy Oil - Makers type R. H. 135A or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 230 mm Length of stroke 350 mm No. of cylinders 8 No. of cranks 8  
 Mean Indicated Pressure 6.65 kg/cm<sup>2</sup>

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 267 mm Is there a bearing between each crank yes  
 Revolutions per minute 350 Flywheel dia. 880 mm Weight 780 kg Means of ignition diesel syst. Kind of fuel used diesel oil

Crank Shaft, { Solid forged  
 dia. of journals as per Rule 136 mm Crank pin dia. 150 mm Crank Webs Mid. length breadth 210 mm Thickness parallel to axis -  
 { Some built  
All built as fitted 150 mm Mid. length thickness 70 mm Thickness around eyehole -

Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as per Rule 98 mm  
 as fitted - as fitted - as fitted 136 mm

Tube Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule 109 mm Is the { tube  
 as fitted - as fitted 115 mm { screw } shaft fitted with a continuous liner { no

Bronze 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  
 as fitted - as fitted - 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 the tube  
 shaft yes If so, state type Cedarwall Length of Bearing in Stern Bush next to and supporting propeller 460 mm

Propeller, dia. 1580 mm Pitch 920 mm No. of blades 4 Material Brass whether Moveable no Total Developed Surface 0.96 sq. feet  
 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 13 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with  
 conducting material yes 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. 1 of 7.8 m<sup>3</sup>/h main drives the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 85 mm Stroke 65 mm Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line { No. and Size 1 bilge pump 7.8 m<sup>3</sup>/h 1 general service pump 38 m<sup>3</sup>/h (self priming)  
 { How driven main engine auxiliary oil engine

Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping  
 arrangements -

Ballast Pumps, No. and size 1 of 38 m<sup>3</sup>/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 of 3.1 m<sup>3</sup>/h driven by  
 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 2 — one of 55 mm diam. frame 7-8, one of 55 mm diam. frame 19/30 In Pump Room -  
 Holds, &c. 3 one of 50 mm diam. port and stb frame 20/31, one of 50 mm diam. frame 64/65

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one of 55 mm diameter frame 13/14  
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

and 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 yes

Are they fitted 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 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 -

Do the pipes pass through the bunkers - How are they protected -  
 Do the 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 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 no Is it fitted with a watertight door - worked from -  
 On 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. - No. of stages - Diameters - Stroke - Driven by -  
 Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 115 / 45 mm Stroke 70 mm Driven by aux. oil engine

Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -  
 What provision is made for first Charging the Air Receivers the aux. oil engine to which the compressor is clutched can be started by hand

Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -  
 Auxiliary Engines crank shafts, diameter as per Rule - No. one two-cyl. heavy oil eng.

as fitted journals 65 mm, pins 70 mm Position port side engine room  
 Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith by Augsburg Surveyors

AIR RECEIVERS:—Have they been made under survey yes State No. of Report or Certificate copies of certificates attached  
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                       
Starting Air Receivers, No. two Total cubic capacity each 0.25 m<sup>3</sup> Internal diameter 377 mm thickness 6.5 mm  
Seamless, lap welded or riveted longitudinal joint seamless Material S-M-Steel Range of tensile strength 51.6-56.2 kg/mm<sup>2</sup> Working pressure by Rules 32.86 kg/sq. cm  
Actual 30 kg/sq. cm

IS A DONKEY BOILER FITTED? no 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 4. 10. 1937. Receivers 24. 8. 37, 6. 11. 37. Separate Fuel Tanks yes  
(If not, state date of approval)  
Donkey Boilers — General Pumping Arrangements yes Pumping Arrangements in Machinery Space yes  
Oil Fuel Burning Arrangements —

### 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,  
G. Benck jun. 5-14 July 1938 Manufacturer.  
Königsplatz 11, Hamburg

Dates of Survey while building { During progress of work in shops -- Please see Augsburg Report No. 2024. Shafting 21. 2. 38.  
During erection on board vessel -- April 27<sup>th</sup>, May 6<sup>th</sup>, 16<sup>th</sup>, 21<sup>st</sup>, 24<sup>th</sup>, June 1<sup>st</sup>, 7<sup>th</sup>, 15<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 21<sup>st</sup>.  
Total No. of visits 11.

Dates of Examination of principal parts—Cylinders Please Covers see Pistons Augsburg Rods Report Connecting rods No. 2024  
Crank shaft dated 10. 5. 38. Flywheel shaft — Thrust shaft — Intermediate shafts — Tube shaft —  
Screw shaft 21. 2. 38. Propeller 21. 2. 38, 6. 4. 38 Stern tube 21. 2. 38, 6. 4. 38 Engine sealings 27. 4. 38. Engines holding down bolts 1. 6. 38.  
Completion of fitting sea connections 6. 5. 38. Completion of pumping arrangements 7. 6. 38. Engines tried under working conditions 17. 6. 38, 18. 6. 38.  
Crank shaft, Material S-M-Steel Identification Mark LLOYD'S 118 W.P. 25. 2. 38 Flywheel shaft, Material — Identification Mark —  
Thrust shaft, Material S-M-Steel Identification Mark LLOYD'S 2854 H.B. 23. 12. 38 Intermediate shafts, Material — Identification Marks —  
Tube shaft, Material — Identification Mark — Screw shaft, Material S-M-Steel Identification Mark LLOYD'S 113 W.F.C. 21. 2. 38.  
Identification Marks on Air Receivers 1113 LLOYD'S TEST No. 90. 854 LBS 60 ATM W.P. 42. 7. LBS W.P. 30 ATM. H.K. 12-2-38. W.P. 5-5-38.

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 no 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.) The main- and auxiliary heavy oil engines have been built at Mannheim under Special Survey of the Society's Surveyors. Material and workmanship of this machinery are of good quality and the outfit is ample. It has been fitted under Special Survey at Hamburg in accordance with the approved plans, the Secretary's letters and otherwise in conformity with the requirements of the Rules. During the trial trip the machinery has given satisfaction under full working and manoeuvring conditions.

The machinery is eligible in my opinion to be classed and to have notations in the Society's Register Book of LMC 6,38 - Oil eng - TS (OG)

The amount of Entry Fee 1/5 x RMC : 8 - When applied for, 19  
Special 1/5 £ " " : 64 -  
Donkey Boiler Fee £ : : When received, 28-12-38  
Travelling Expenses (if any) £ RM : 18 - 18/12

Committee's Minute FRI 15 JUL 1938

Assigned + LMC 6.38 by OG

H. Röhrs  
Engineer Surveyor to Lloyd's Register of Shipping.