

REPORT ON OIL ENGINE MACHINERY.

No. 1750

24.3.52.

Received at London Office
H A M B U R G

Date of writing Report 7th March 1952 When handed in at Local Office 19 Port of H A M B U R G

No. in Survey held at H A M B U R G Date, First Survey 27th Aug. 1951 Last Survey 20th Feb. 1952
Reg. Book. Supplement Single
16347 on the ~~Four~~ Triple Screw vessel "GRONLAND"
Tons Gross 11600 Net -

Built at Hamburg-Finkenwerder By whom built Deutsche Werft A.G. Yard No. 635 When built 1952
Engines made at Augsburg By whom made M.A.N. Engine No. 503000 When made 1952
Donkey Boilers made at Hamburg-Finkenwerder By whom made Deutsche Werft A.G. Boiler No. 1180/81 When made 1952
Brake Horse Power { Maximum 8000 der
Service 6650 Owners A/S Det Dansk-Franske Dampskipselskab Port belonging to Copenhagen
N. as per Rule 1600 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
ade for which vessel is intended International

L ENGINES, &c. — Type of Engines Heavy Oil, Type D 8 Z 70/120 2 or 4 stroke cycle 2 Single or double acting double
Maximum pressure in cylinders top 50 Atm. bott. 47 Atm. Diameter of cylinders 700 mm Length of stroke 1200 mm No. of cylinders 8 No. of cranks 8
Indicated Pressure 8000 BHP - 5,3 Atm. - n 117/6650 BHP - 4,9 Atm. Span of bearings (i.e., distance between inner edges of bearings in
y of a crank) 1020 mm Is there a bearing between each crank yes Revolutions per minute { Maximum 117 - 8000 BHP
Service 110 - 6650 BHP
Flywheel dia. 2700 mm Weight 4000 kg Moment of inertia of flywheel (lbs. in² or Kg. m²) 17000 kg m² Means of ignition comp. Kind of fuel used diesel
" " " " balance wts. (" " " " ") /m² -

ank { Solid forged
aft, { Semi built dia. of journals as per Rule. Crank pin dia. 524,5 mm Crank webs Mid. length breadth. Thickness parallel to axis 310 mm
All built as fitted 523 mm Mid. length thickness 310 mm shrunk Thickness around eye-hole 238,5 mm

Flywheel Shaft, diameter as per Rule. Intermediate Shafts, diameter as per Rule. Thrust Shaft, diameter at collars as per Rule.
as fitted 525 mm as fitted 500 mm as fitted 500 mm

Tube Shaft, diameter as per Rule. Screw Shaft, diameter as fitted 499 x 501 mm Is the (tube) shaft fitted with a continuous liner { yes
as fitted 26,5-25,5 mm as fitted 26,5-25,5 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 -
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 fitted at the after
end of stern tube. - If so, state type. - Length of bearing in Stern Bush next to and supporting propeller 2000 mm
Propeller, dia. 5450 mm Pitch 4350 mm No. of blades 4 Material Bronze whether moveable no Total developed surface 9,808 sq. feet
Moment of inertia of propeller including entrained water (lbs. in² or Kg. m²) 71000 kg +30% Kind of damper, if fitted -

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine yes Means of
lubrication forced Thickness of cylinder liners 45 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled
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. and how driven 3 - 400 m³/h Working F.W. 1
W. 1 Spare F.W. and S.W. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Large Pumps worked from the Main Engines, No. and capacity none Can one be overhauled while the other is at work. -
Pumps connected to the Main Bilge Line { No. and capacity of each 1-75 m³/h (Bilge Pp) 1-200 m³/h (Condenser cooling w. Pp.)
How driven electric (Bilge Pump) steam (Condenser cooling water pump)

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 - (General Service Pump in engine room)

Ballast Pumps, No. and capacity 1-120 m³/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1-65 m³/h
1-65 m³/h (Forepeak Pumproom)

Are two independent means arranged for circulating water through the Oil Cooler yes Branch Bilge Suctions Mchy, Cargo & F.P. pump room
and size: — In machinery spaces 2-80 mm (fwd) 1-80 mm (aft) 1-80 Cofferdam In pump room 5-80 mm (each)

holds, &c. 2-100 mm (hold) 1-100 mm (chain locker) 1-100 mm (F.P.-pump room) 1-150 (Fwd. cofferdam)

Direct Bilge Suctions to the engine room bilges, No. and size 1-125 mm (Bilge pump) 1-100 mm (General Service Pump) 1-150 mm (Cond. cooling w. pump)

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction pipes 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
efficiently 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 bunks - How are they protected -

What pipes pass through the deep tanks Forepeak line (fwd. stbd. deep tank) 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

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 none 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. 2 No. of stages 2 diameters 2x140/160 mm stroke 130 mm driven by elect. motor
Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -
Small Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -

Is that provision is made for first charging the air receivers. Emergency Diesel Generator can be started by hand for generating steam
in boilers.

Saving Air Pumps or Blowers No. 1 attached - 760 m³/h at How driven by main engine crankshaft
110 R.p.m. yes Engine Nos. 430 725 - 430 726 - 430 727

Auxiliary Engines Have they been made under survey. Makers name M.A.N. Position of each in engine room 2-p.fwd. inbd & outboard
1 port aft Report No. 84, Augsburg, 2.11.1951

004194-00499-0302

AIR RECEIVERS:—Have they been made under survey ☒ yes State No. of report or certificate Ham Cert.N 962 A-B
State full details of safety devices 1 safety valve on each stage of compressor, 1 safety valve in pressure pipe compr.
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. none Cubic capacity of each Internal diameter thickness
Seamless, welded or riveted longitudinal joint Material Range of tensile strength Working pressure
Starting Air Receivers, No. 2 Total cubic capacity 16m³ Internal diameter 1543 mm thickness 28,5 mm
Seamless, welded or riveted longitudinal joint welded Material S.M.O.H. steel Range of tensile strength Working pressure 30 Atm
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 ☒ yes
PLANS. Are approved plans forwarded herewith for shafting ☒ yes Receivers ☒ yes Separate fuel tanks
Donkey boilers ☒ yes General pumping arrangements Pumping arrangements in machinery space ☒ yes
Oil fuel burning arrangements ☒ yes
Have Torsional Vibration characteristics been approved Date and particulars of approval

SPARE GEAR.

Has the spare gear required by the Rules been supplied ☒ yes State if for "short voyages" only no, Ocean going
State the principal additional spare gear supplied spare shaft ☒

DEUTSCHE WERFT

The foregoing is a correct description of the machinery of the vessel *Deutsche Werft A.G., Hamburg, Finkenwerder, Nos. 1182 & 1183* Manufacturer.

Dates of Survey while building During progress of work in shops - -
During erection on board vessel - - Aug.: 27, Sep.: 20, Oct.: 6, 20, 30, Nov.: 7, 12, 16, 20, 22, 28, Dec.: 1, 3, 4, 7, 11, 12, 18, 20, 27, Jan.: 2, 5, 7, 9, 12, 16, 17, 19, 22, 26, Feb.: 1, 7, 8, 11, 12, 15, 19
Total No. of visits 38
Dates of examination of principal parts—Cylinders 19.4.50 Covers 7.1.50-28.2.50 Pistons 22.9.49 Rods 11/24.1.50 Connecting rods 28.3.50
Crank shaft 25.1.51 Flywheel shaft 9.3.50 Thrust shaft 30.10.51 Intermediate shafts 30.10.51 Tube shaft 11/12.4.51
Screw shaft 22.11.51 Propeller 23.10.51 Stern tube 22.11.51 Engine seatings 20.12.51 Engine holding down bolts 6.2.52
Completion of fitting sea connections 20.12.51 Completion of pumping arrangements 1.2.52 Engines tried under working conditions 7.2.52
Crank shaft, material SMOH steel Identification mark LLOYDS 1574/75/76 Flywheel shaft, material, SMOH steel Identification mark LLOYDS 10
Thrust shaft, material SMOH steel Identification mark LLOYDS 171 Intermediate shafts, material SMOH steel Identification marks LLOYDS H
Tube shaft, material - Identification mark 30.10.51 R.F.K. Screw shaft, material SMOH steel Identification mark LLOYDS HS 1
Identification marks on air receivers R.F.K. 962 A + 962 B LLOYD'S TEST 49 Atm. WP 30 Atm.

Welded receivers, state Makers' Name Deutsche Werft A.G., Hamburg, Finkenwerder, Nos. 1182 & 1183

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

Full description of fire extinguishing apparatus fitted in machinery spaces Steam smothering, flooding & Chemical Extinguishing

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 -

What is the special notation desired -

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, Speed restrictions, &c. This engine has been constructed under

Special Survey in conformity with the Society's Rules and Regulations, the approved plans and the Secretary's

letters. The materials and workmanship are good. The engine has been examined during construction, properly

installed in the above vessel and found satisfactory under working conditions and is eligible, in my opinion, for

classification with the notation * LMC 2,52,

Oil Engines 2 SC DA, 8 Cyl. 27 9/16" - 47 1/4", 1600 MN, 2 DB - 170,7 lbs, 2 DB(WT) 170,7 lbs TS CL.

The Machinery is not to be operated continuously between 56 and 67 R.p.m. A notice to this effect has been

fitted to the engine control platform.

The amount of Entry Fee ... £ - : -

Special ... £ 190 : 0

Donkey Boiler Fee... £ 132 : 0

Travelling Expenses (if any) £ 34 : 0

When applied for 19

When received 19

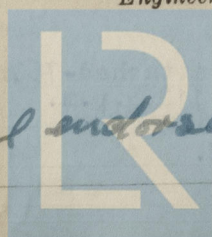
Committee's Minute

Assigned

+ LMC 2,52 Oil Eng. (with torsional endorsement)
C.L. 2 DB 171/6 DB(WT) 171/6

FRI. 16 MAY 1952

W. Schenck & R. Kähler
Engineer Surveyors to Lloyd's Register of Shipping



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Foundation