

REPORT ON OIL ENGINE MACHINERY.

No. 72091

SEP 1947

Received at London Office 24 SEP 1947

Date of writing Report 19 When handed in at Local Office 19-9 1947 Port of GLASSGOW

Date, First Survey 29 10 45 Last Survey 17 9 1947

Number of Visits 117

Survey held at GLASSGOW

on the Motor Vessel "LA HEVE"

Single Triple Quadruple Screw vessel

GLASSGOW By whom built HARLANDY WOLFF LD. Yard No. 1345 When built 1947

GLASSGOW By whom made HARLANDY WOLFF LD. Engine No. 1345 When made 1947

By whom made Owners THE FRENCH GOVERNMENT Boiler No. When made

5500 Owners THE FRENCH GOVERNMENT Port belonging to NANTES

217 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES

OCEAN GOING

ENGINES, &c. — Type of Engines HEAVY OIL AIRLESS INJECTION 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 700 lb/sq. in. Diameter of cylinders 620 7/8 Length of stroke 1150 7/8 No. of cylinders 20 No. of cranks 10

Indicated Pressure 100 lb/sq. in. Is there a bearing between each crank YES

Revolutions per minute 135 Flywheel dia. 2136 7/8 Weight 2000 Kgs Means of ignition Comp. Kind of fuel used Diesel

ank shaft, dia. of journals as per Rule 425 7/8 as fitted 445 7/8 Crank pin dia. 445 7/8 Crank webs Mid. length breadth 825 MEAN Thickness parallel to axis 280 7/8

Intermediate Shafts, diameter as per Rule 13.87 as fitted 14 1/8 Thrust Shaft, diameter at collars as fitted 440 7/8

Propeller Shaft, diameter as per Rule 15.16 as fitted 15 3/4 Is the shaft fitted with a continuous liner YES

Propeller Shaft, diameter as fitted 15 3/4

Propeller Liners, thickness in way of bushes as per Rule 13/16 as fitted 13/16 Thickness between bushes as per Rule 9/16 as fitted 27/32

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 tube shaft NO

Length of bearing in Stern Bush next to and supporting propeller 5'3"

Propeller, dia. 15'6" Pitch 12'9" No. of blades 4 Material Bronze whether moveable NO Total developed surface 90 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 Lubricated Thickness of cylinder liners 42 7/8 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. 1FW 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. None Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line (No. and size) 1 Ballast 150 tons/hr 1 Bilge 90 tons/hr 1 Gen. Ser. 60 tons/hr

How driven Electric motors

Is the cooling water led to the bilges NO

Are there any special arrangements made to deal with this water in addition to the ordinary bilge pumping arrangements

Bilge Pumps, No. and size 1 @ 150 tons/hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 @ 220 tons/hr

Are there two independent means arranged for circulating water through the Oil Cooler YES

Suctions, connected to both main bilge pumps and auxiliary pumps, No. and size:—In machinery spaces 2 @ 3 1/2, 3 @ 2 1/2, 1 @ 2 Tunnel well 1 @ 3" app. In pump room

Holds, &c. N°1 Hold 2 @ 3", N°2 Hold 2 @ 3" N°3 Hold 2 @ 2 1/2" N°4 Hold 2 @ 3" N°5 Hold 2 @ 2 1/2" N°6 Hold 1 @ 2 1/2"

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 @ 6" 1 @ 5"

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 BOTH

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 Below

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 any pipes pass through the bunkers NONE

How are they protected

Do any pipes pass through the deep tanks NONE

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 YES

Is it fitted with a watertight door YES

worked from MAIN DECK

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. None No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 280 7/8 1245 7/8 stroke 130 7/8 driven by ELECTRIC MOTOR

Small Auxiliary Air Compressors, No. ONE No. of stages 2 CAPACITY 15 CUB. FT. diameters stroke driven by EMERGENCY GENERATOR

Is any provision made for first charging the air receivers Small compressor driven by emergency generator

Revolving Air Pumps, No. None diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule Approved as fitted No. 3 Position 2 Port 1 Starboard

Have the auxiliary engines been constructed under special survey YES

Is a report sent herewith YES

5270-11900-0273
006903-006911-0273

AIR RECEIVERS:—Have they been made under survey... *yes* State No. of report or certificate... **21816**

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. *None* Cubic capacity of each... Internal diameter... Thickness... Working pressure... Actual... *33.6*

Seamless, lap welded or riveted longitudinal joint... Material... Range of tensile strength... Working pressure... Actual... *33.6*

Starting Air Receivers, No. *Two* Total cubic capacity... *540 cub. ft.* Internal diameter... *7 3/4"* thickness... *1 1/8"*

Seamless, lap welded or riveted longitudinal joint... *Welded* Material... *Steel* Range of tensile strength... *29/33 ton* Working pressure... Actual... *33.6*

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... *30-N-46* Receivers... *Off. Belfast* Separate fuel tanks... *13-9-46*

Donkey boilers... General pumping arrangements... *13-9-46* Pumping arrangements in machinery space... *13-9-46*

Oil fuel burning arrangements...

SPARE GEAR.

Has the spare gear required by the Rules been supplied... *yes* *See attached*

State the principal additional spare gear supplied... *Propeller shaft and C. I. propeller*

MARKS ON SPARE SCREW SHAFT

ALLOYDS
S 5053
E B
27566
21-8-46
NK 30-7-47

The foregoing is a correct description, *Wm. J. Wright* Manufacturer.

Dates of Survey while building

During progress of work in shops - *1945 Dec 29 1946 Jan 20 Apr 19 May 25 23 27 29 Jun 36 10 17 19 26 Jul 1 23 30 Aug 28 12 14 19 24 29 Sep 4 10 16 Oct 7 14 23 24 Nov 11 13 14 20 25 27 28 Dec 2 4 5 6 23 27 1947 Jan 7 13 15 22 27 30 31 Feb 3 6 13 15 17 18 19 26 27 Mar 5 10 12 24 17 20 24 26 27 31 Apr 3 9 14 16 17 21 22 24 25 28 29 May 7 8 13 29 30 Jun 18 23 26 Jul 14 21 28 30 Aug 4 6 11 13 14 15 17 Sep 2 3 5 9 11 12 14 15 17*

During erection on board vessel -

Total No. of visits... *117*

Dates of examination of principal parts—Cylinders... *21-4-47 12-3-47 23-4-47 23-4-47 14-3-47*

Crank shaft... *2-4-47* Flywheel shaft... *2-4-47* Thrust shaft... *2-4-47* Intermediate shafts... *23-12-46* Tube shaft... *—*

Screw shaft... *13-1-47* Propeller... *13-1-47* Stern tube... *23-12-46* Engine seatings... *17-2-47* Engine holding down bolts... *18-8-47*

Completion of fitting sea connections... *17-2-47* Completion of pumping arrangements... *4-9-47* Engines tried under working conditions... *17-9-47*

Crank shaft, material... *CAST S.M. STEEL* Identification mark... *NK 2-4-47* Flywheel shaft, material... *STEEL* Identification mark... *NK 2-4-47*

Thrust shaft, material... *S.M. STEEL* Identification mark... *NK 2-4-47* Intermediate shafts, material... *STEEL* Identification marks... *ALLOYDS S 40 NK 13-1-47*

Tube shaft, material... Identification mark... Screw shaft, material... *STEEL* Identification mark... *NK 13-1-47*

N° 364
ALLOYDS TEST
584605/17
W.P. 356105/17
R.O.B 5-11-46

N° 365
ALLOYDS TEST
384605/17
W.P. 356105/17
R.O.B 10-12-46

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*

Description of fire extinguishing apparatus fitted... *Loamite fire hose*

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... *yes* If so, state name of vessel... *N/V MORBIHAN GLS. RPT. N° 71892*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been constructed under special survey in accordance with the Rules and approved plans. The materials and workmanship are good. The machinery has been satisfactorily installed in the vessel, tried under full working conditions and found in good order and is eligible in my opinion to have Record of *LMC 9.47 and T.S.C.L.*

The torsional vibration characteristics are in accordance with Gandon letter dated 5-7-46

The amount of Entry Fee ... £ ...

Special ... £ *186* ... When applied for... *23 SEP 1947* 19

Donkey Boiler Fee... £ ... When received... 19

Travelling Expenses (if any) £ ...

W. Russell
Engineer Surveyor to Lloyd's Register of Shipping

Lloyd's Register Foundation

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

Committee's Minute
Assigned... *1- LMC 9.47* *Wm. Wright*