

REPORT ON OIL ENGINE MACHINERY.

No. 16102

Received at London Office

18 APR 1946

Date of writing Report 10 April 1946 When handed in at Local Office

19

Port of Amsterdam

No. in Survey held at den Helder & Amsterdam Date, First Survey 20 January Last Survey 27 March 1946

Reg. Book.

Number of Visits 6

Single
on the Twin
Triple
Quadruple

Screw Vessel

M.V. "HELENA"

Tons

Gross 182

Net 109

Built at Groningen

By whom built J. Vos & Zonen

Yard No. 80 When built 1934

Engines made at Springendoom

By whom made Brons Moham fab

Engine No 660 When made 1934

Monkey Boilers made at ✓

By whom made ✓

Boiler No. ✓ When made ✓

Indicated Horse Power 105

Owners K. Pronk

Port belonging to Groningen

Nom. Horse Power as per Rule 30

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Coasting service

OIL ENGINES, &c.—Type of Engines Heavy oil engine

2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 kg/cm²

Diameter of cylinders 280 mm

Length of stroke 350 mm

No. of cylinders 3

No. of cranks 3

Mean Indicated Pressure 5 kg/cm²

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 380 mm

Is there a bearing between each crank yes

Revolutions per minute 290

Flywheel dia. 1400 mm

Weight 1600 kg

Means of ignition Compressed air

Kind of fuel used Dual oil

Crank
shaft,
{ Solid forged
Semi built dia. of journals
All builtas per Rule ✓
as fitted 160 mm

Crank pin dia 160 mm

Crank Webs

Mid. length breadth 210 mm
Mid. length thickness 102 mm

shrunk

Thickness parallel to axis ✓
Thickness around eyehole ✓

Wheel Shaft, diameter

as per Rule ✓
as fitted ✓

Clutch coupling

Intermediate Shafts, diameter

as per Rule ✓
as fitted 120 mm

Thrust Shaft, diameter at collars

as per Rule ✓
as fitted ✓

Propeller Shaft, diameter

as per Rule ✓
as fitted ✓

Screw Shaft, diameter

as per Rule ✓
as fitted 120 mm

Is the tube

{

screw

shaft fitted with a continuous liner

no

Cylinder Liners, thickness in way of bushes

as per Rule no liners
as fitted ✓

Thickness between bushes

as per Rule ✓
as fitted ✓

Is the after end of the liner made watertight in the

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 cylinder 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

If so, state type ✓

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades 3 Material bronze whether Moveable no Total Developed Surface sq. feet

Method of reversing Engines Clutch Coupling Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Thickness of cylinder liners 15 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

conducting material ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

Bilge Water Pumps, No. one from main engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Pumps worked from the Main Engines, No. one Diameter 50 mm Stroke 7.5 mm Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line } No. and Size one bilge pump main engine, general service pump, wing pump direct

How driven Belt driven from main & turn engine

Is 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 ✓

Fast Pumps, No. and size one centrifugal pump Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

Two independent means arranged for circulating water through the Oil Cooler no Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 1-2" - 1-2 1/2" from wing pump direct In Pump Room ✓

Folds, &c. 2-2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2" from wing pump

All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

All Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks 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 ✓

Do pipes pass through the bunkers. ✓ How are they protected ✓

Do pipes pass through the deep tanks. ✓ Have they been tested as per Rule ✓

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

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,

from one compartment to another yes Is the Shaft Tunnel watertight no Is it fitted with a watertight door ✓ worked from ✓

If the vessel is a food vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. one No. of stages 2 Diameters Stroke Driven by

Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters Stroke Driven by

Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters Stroke Driven by

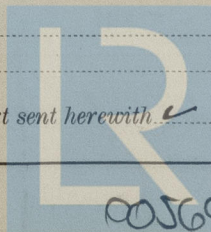
Is provision made for first Charging the Air Receivers Auxiliary motor started by hand

Engaging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule No.

as fitted 60 mm Position

Have the Auxiliary Engines been constructed under special survey no Is a report sent herewith ✓



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AIR RECEIVERS:—Have they been made under survey *no* State No. of Report or Certificate *✓*

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 *by Rules* *✓*

Starting Air Receivers, No. *3*

Total cubic capacity *3 x 45 L*

Internal diameter *253 mm*

thickness *7 mm*

Seamless, lap welded or riveted longitudinal joint *Seamless*

Material *SM S*

Range of tensile strength

Working pressure *Actual*

IS A DONKEY BOILER FITTED? *no*

If so, is a report forwarded? *✓*

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

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

*1 main cylinder cover, 1 piston complete, 1 set of bottom end brasses with bolts
1 ball bearing for thrust shaft, 2 bearing bolts & assorted bolts*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - }
Total No. of visits

Dates of Examination of principal parts—Cylinders *5-3-46* Covers *5-3-46* Pistons *5-3-46* Rods *✓* Connecting rods *5-3-46*

Crank shaft *3-3-46* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*

Screw shaft *✓* Propeller *✓* Stern tube *✓* Engine seatings *✓* Engines holding down bolts *✓*

Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *✓*

Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *✓* Identification Marks *✓*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *✓* Identification Mark *✓*

Identification Marks on Air Receivers

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 *no*

Is this machinery duplicate of a previous case *no* If so, state name of the vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery has been built to the G.T. requirements. The Machinery have been completely opened up & found good.*

2 Auxiliary engines: G.T. & electric C.G. 1st & 2nd dynamo's. General service pump & anti-siphon pump. Tailshaft drawn & found good. Seacocks in good.

Propeller & fastenings good. Tested main & Auxiliary engines found working good. Meggar test held found as per rules. Electric light tested & good.

The Machinery is in our opinion eligible for the record of LMC 3-46 in the Society's Register Book and notation on T.S. Ken 3-46

The amount of Entry Fee .. £ : : When applied for,
Special & repair... *£ 300 -* : : *15-4-1946*
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) *£ 51 -* : : *19*

Committee's Minute

FRI. 9 AUG 1946

Assigned

LMC 3.46 Oil Eng Subject

P. F. Willmott
for P. F. Willmott
Engineer Surveyor to Lloyd's Register of Shipping



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Foundation