

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 4849

Received at London Office

MAY -1 1939

Date of writing Report 28th April 1939 When handed in at Local Office

Port of Stockholm.

No. in Survey held at Sickla, Skm. District

Date First Survey 13/3/35

Last Survey 22/3/ 19 39

Reg. Book.

Number of Visits 16

Single
Twin
Triple
QuadrupleMotor
Screw vessel

"GUERNSEY QUEEN"

Tons { Gross
Net

Built at Buntisland

By whom built Buntisland Shipbuilding Co. Ltd.

Yard No. 228 When built 1939

Engines made at Stockholm.

By whom made A.B. Atlas Diesel.

Engine No. 85614 When made 1939.

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 800

Owners Coast Lines Lim.

Port belonging to LONDON.

Nom. Horse Power as per Rule 157

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

1378 2276

OIL ENGINES, &c.—Type of Engines Polar Diesel Oil Engine, type M45H 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm²

Diameter of cylinders 340 mm. Length of stroke 570 mm. No. of cylinders 5 No. of cranks 5

Mean Indicated Pressure 7

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 484 mm.

Is there a bearing between each crank Yes.

Revolutions per minute 250

Flywheel dia. 1550 mm.

Weight 2580 kg.

Means of ignition Compression Kind of fuel used Marine Diesel Oil.

Crank Shaft, dia. of journals as per Rule

as fitted 220 mm.

Crank pin dia. 220 mm.

Crank Webs

Mid. length breadth 308.3 mm.

Thickens parallel to axis

Mid. length thickness 122

Thickens around eyehole

Flywheel Shaft, diameter as per Rule

as fitted

Intermediate Shafts, diameter as per Rule

as fitted

Thrust Shaft, diameter at collars as per Rule

as fitted 260 mm.

Tube Shaft, diameter as per Rule

as fitted

Screw Shaft, diameter as per Rule

as fitted

Is the { tube { shaft fitted with a continuous liner {
screw }

Bronze Liners, thickness in way of bushes as per Rule

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 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 If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

sq. feet

Method of reversing Engines By compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes

Means of lubrication

pumps Thickness of cylinder liners 25.5 mm. Are the cylinders fitted with safety valves Yes.

Are the exhaust pipes and silencers water-cooled or lagged with

non-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. One.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 1

Diameter 100 mm.

Stroke 140 mm.

(Double-acting) Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size
How driven

Is the cooling water led to the bilges

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

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2- Each 350 ltr/min

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

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

In Pump Room

In Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are they fixed 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

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers

How are they protected

What 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

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

If 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. One

No. of stages 2

Diameters 175/70 mm.

Stroke 350 mm.

Driven by Main Engine

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Scavenging Air Pumps, No. One

Diameter 860 mm.

Stroke 350 mm.

Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule
as fitted

No.

Position

003698-003705-0097

Lloyd's Register
Foundation

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. *None fitted* Cubic capacity of each

Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules Actual

Starting Air Receivers, No. *2*

Total cubic capacity *1600 litres*

Internal diameter *650 mm.*

thickness *14 mm.*

Seamless, lap welded or riveted longitudinal joint *Riveted*

Material *S.H. Steel*

Range of tensile strength

Shell 44-50 kg/cm²

Working pressure by Rules Actual

Ends 41-47 "

Actual 25 kg/cm²

IS A DONKEY BOILER FITTED?

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 *E. 23/12/36*

(If not, state date of approval)

Receivers *E 10.9.35*

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

As per enclosed list. The spare gear has been examined before it was despatched. The additional water circulating pump and the daily fuel supply pump will be delivered by the Ship Builders.

The foregoing is a correct description,

AKTIEBOLAGET ATLAS DIESEL

S. Jacobson

Manufacturer.

Dates of Survey while building
During progress of work in shops - *13, 4, 35; 30, 23, 28, 36; 20, 11, 3, 31, 37; 14, 6, 38; 28, 27, 14, 17, 22, 39;*
During erection on board vessel - *16*
Total No. of visits *16*

Dates of Examination of principal parts—Cylinders *17/3/39* Covers *17/3/39* Pistons *17/3/39* Rods *13, 4, 35;*
Crank shaft *28, 36, 20, 37; 1, 39* *Seav. air pump* Thrust shaft *30, 28, 36; 17, 39* Intermediate shafts *20, 31, 37;*
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts *14, 3, 39.*

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions
Crank shaft, Material *S.H. Steel.* Identification Mark *LLOYDS No 6863* *Seav. air pump* Thrust shaft, Material *S.H. Steel.* Identification Mark *LLOYDS No 6897*
Thrust shaft, Material *S.H. Steel.* Identification Mark *LLOYDS No 6809* Intermediate shafts, Material Identification Marks *K.A. 11.2.37.*
Tube shaft, Material Identification Mark *K.A. 23.11.36* Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

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 *Please see Skm. Rpt. No 4709.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

I am of opinion that this engine is of superior material and workmanship and as it has been designed and constructed under Special Survey, I have respectfully to submit that it be classed +LMC, as soon as it has been fitted into Messrs. The Brunatistland S. B. Co's Yard No 228, to the satisfaction of the Society's Surveyors.

The amount of Entry Fee .. £ : : When applied for,
Special ... *£ 500.-* : : 19.
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) *£ 5.-* : : *11. 8. 19*

Committee's Minute

Assigned

FRI 19 MAY 1939

See Lth. JE 19840

R. J. Andersson
Engineer/Surveyor to Lloyd's Register of Shipping.



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