

REPORT ON OIL ENGINE MACHINERY.

No. 7942
-2 MAY 1929

Date of writing Report 14-4-29 When handed in at Local Office 19

Port of Copenhagen

No. in Survey held at Helsingør and Copenhagen

Date, First Survey 18/8/1929

Last Survey 28/3

1929

Reg. Book.

Number of Visits 17

92088 on the Single Motor "SANTA INEZ" Twin Screw vessel

Tons Gross 5538.40
Net 3371.14

Built at Copenhagen

By whom built 7/8 Bünnmeister & Wain

Yard No. 552 When built 1929

Engines made at Helsingør

By whom made 7/8 Helsingør Dieselværk Fabrik Engine No. 1612 When made 1928

Donkey Boilers made at Lunan

By whom made Messrs. Cochran & Co. Lunan, Ltd. Boilers No. 1027-30 When made 1928

Brake Horse Power 3520

Owners Grace Steamship Co. Ltd. (W. R. Grace & Co.) Port belonging to New York

Nom. Horse Power as per Rule 708

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted yes

Trade for which vessel is intended Passenger trade between ports in North & South America

OIL ENGINES, &c.—Type of Engines Vertical Diesel, trunk type 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 310 mm Length of stroke 350 mm No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 360 mm Is there a bearing between each crank yes

Revolutions per minute 400 Flywheel dia. 1240 mm Weight 2710 kg Means of ignition compression Kind of fuel used ord. Diesel oil

Crank Shaft, dia. of journals as per Rule 162 mm as fitted 170 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 355 mm di. sh. Thickness parallel to axis ✓

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

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 4 1/2 inches Is the tube shaft fitted with a continuous liner ✓

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 Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

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

non-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

Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

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

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

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 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. No. of stages Diameters a b c Stroke Driven by

Auxiliary Air Compressors, No. 4 No. of stages 3 Diameters 3/8-285-78 Stroke 220 mm Driven by 4 auxil Diesel engines

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

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

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 yes What means are provided for cleaning their inner surfaces arrangements made for cleaning

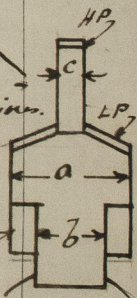
Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 4 Cubic capacity of each 30 litres Internal diameter 7 1/4" thickness 3/8"

Seamless, lap welded or riveted longitudinal joint seamless Material mild steel Range of tensile strength 30.6-33.5 Working pressure by Rules 1453 lbs./sq. in. ✓

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules



IS A DONKEY BOILER FITTED? *yes.*

If so, is a report now forwarded? *yes.*

PLANS. Are approved plans forwarded herewith for Shafing *yes.*
(If not, state date of approval)

Receivers *✓*

Separate Tanks *✓*

Donkey Boilers *yes:*

General Pumping Arrangements *yes.*

Oil Fuel Burning Arrangements *✓*

SPARE GEAR *as per accompanying list.*

The foregoing is a correct description,

AKTIESELSKABET
HOLEBY DISELMOTOR FABRIK

Manufacturer.

Dates of Survey while building
During progress of work in shops - - *18/8. 23/8. 1/9. 10/9. 19/9. 10/10. 27/10. 27/11. 1928.*
During erection on board vessel - - *21/11. 1928. 9/2. 13/2. 22/2. 28/2. 6/3. 16/3. 22/3. 28/3. 1929.*
Total No. of visits

Dates of Examination of principal parts—Cylinders *with* Covers *18/8. 10/10* Pistons *27/10* Rods *✓* Connecting rods *23/8. 1/9. 10/10.*
Crank shafts *23/8. 1/9. 10/10* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*
Screw shaft *✓* Propeller *✓* Stern tube *✓* Engine seatings *21/11. 3/12* Engines holding down bolts *9/2. 13/2*
Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *27/11. 28/3. 28/3*
Crank shaft, Material *S. H.* Identification Mark *10. 10. 28* 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 *✓*

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 *✓*

Is this machinery duplicate of a previous case *✓*

If so, state name of vessel *✓*

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

The auxiliary engine as above described has been built under Special Survey and in accordance with the Rules, the approved plan of crank shaft and the conditions contained in the Surveyor's letter to dated 3/7 1928.

The material used in the construction has been tested and examined as required by the Rules and found good, and the workmanship is of good description throughout.

The engine has been fitted on board the vessel under our supervision and to our satisfaction, and on completion the engine was tested under full power working conditions and found to work satisfactorily.

The amount of Entry Fee ... £ : : When applied for,
Special ... *£ 400.-* 7/12 1928
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) *£ 76.-* 13/12 1928

Committee's Minute *7 MAY 1929*

Assigned

See rph attached

A. O. J. J. J. *Chubb*
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation