

## REPORT ON OIL ENGINE MACHINERY

No. 8807

Received at London Office.

113 JUN 1949

Date of writing Report. 2nd March 1949. When handed in at Local Office. 25th March 1949. Port of Baltimore, Maryland.

No. in Survey held at Baltimore, Maryland. Date, First Survey May 13th. Last Survey December 23rd, 1948. Reg. Book. 68795. Number of Visits. 16.

1947/48 on the ~~Steam~~ <sup>Single</sup> ~~Triple~~ <sup>Scotch</sup> Screw vessel "ANNA SALEN" (Ex ARCHER) Tons Gross 7840 Net 4635

Built at Chester, Pa. By whom built Sun SB and DD Co. Yard No. 1084-1087 When built 1940

Engines made at St. Louis, Mo. By whom made Busch Sulzer Bros. Engine No. 1085-1086 When made 1940

Donkey Boilers made at N. Y. By whom made Foster Wheeler Corp. Boiler No. When made 1940

Brake Horse Power 4(2225) = 8900 Owners Sven Salen Port belonging to Stockholm.

Nom. Horse Power as per Rule 2063 MN = 2670 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which Vessel is intended General Cargo

OIL ENGINES, &amp;c.—Type of Engines 4-2SCSA Diesel 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 750 Diameter of cylinders 20.5" Length of stroke 27.5" No. of cylinders 28 No. of cranks 28

Mean Indicated Pressure 110 lb/sq. in. Is there a bearing between each crank Yes

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 10.625 ins. 23 7/8" Revolutions per minute 240 Flywheel dia. — Weight — Means of ignition Comp. Kind of fuel used Oil

Crank Shaft, { Solid forged 85" as per Rule — Crank pin dia. 13.75" Crank Webs Mid length breadth 20" Thickness parallel to axis — All built as fitted 13.75" Mid length thickness 6 3/8" Thickness around eyehole —

Flywheel Shaft, diameter as per Rule — Intermediate Shafts, diameter as per Rule — Thrust Shaft, diameter at collars as per Rule —

Tube Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule — Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule — Thickness between bushes as per Rule — 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 Continuous

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 No

If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 13 1/2"

Propeller, dia. 21'-8" Pitch 20.47sq. No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 166.414 sq. feet

Method of reversing Engines Air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced

Thickness of cylinder liners — 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. 3 Centrifugal 1300gpm. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge 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 (2-600gpm) Steam Duplex How driven 15 H.P. Electric Motor

Is 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 —

Ballast Pumps, No. and size 1-Cent 600gpm. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3-size 8GPM.

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4-3 In Pump Room —

Holds, &amp;c. —

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-6" Are 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

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves

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 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 Yes

Do the pipes pass through the bunkers — How are they protected —

Do the 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 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 compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Main Deck

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

Auxiliary Air Compressors, No. 1 Worthington #5781 No. of Stages 2 Diameters 6.5"x6.5"x4" Stroke 5" Driven by Electric Motor

Auxiliary Air Compressors, No. 2 Worthington #5782 No. of Stages 2 Diameters 6.5"x6.5"x4" Stroke 5" Driven by " "

All Auxiliary Air Compressors, No. 1 Worthington #4228 No. of Stages — Diameters — Stroke — Driven by " "

Is provision made for first Charging the Air Receivers Emergency Generator. Battery Starting.

Ventilating Air Pumps, No. 4 per Engine Diameter Rotary Stroke — Driven by Attached

Auxiliary Engines crank shafts, diameter as per Rule — No. — Position —

Are the Auxiliary Engines been constructed under special survey USCG and ABS Is a report sent herewith —

003479-003486-0043



**AIR RECEIVERS:**—Have they been made under survey USCG and ABS 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  
Injection Air Receivers, No - Cubic capacity of each - Is a drain fitted at the lowest part of each receiver Yes  
Seamless, lap welded or riveted longitudinal joint - Material - Internal diameter - thickness -

Starting Air Receivers, No 4 Total cubic capacity 648 cu. ft. Internal diameter 42" Working pressure by Rules  
Seamless, lap welded or riveted longitudinal joint but - welded Material Steel Range of tensile strength - thickness 1"  
Working pressure Actual 500

**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 - Receivers - Separate Fuel Tanks -  
(If not, state date of approval)  
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 Yes  
State the principal additional spare gear supplied -

The foregoing is a correct description

Manufacturer.

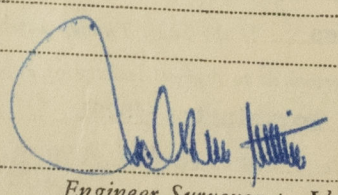
Dates of Survey while building  
During progress of work in shops -  
During erection on board vessel -  
Total No. of visits -

Dates of Examination of principal parts—Cylinders - Covers - Pistons - Rods - Connecting rods -  
Crank shaft - 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 in DTS 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 - If so, state name of vessel -

**General Remarks** (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel built under the supervision of the American Bureau of Shipping has been completely opened up examined throughout and placed in order. It is the record of the undersigned that the machinery installation of this vessel is eligible to be classed with this Society  
record of LMC 12.48

The amount of Entry Fee £ See : When applied for,  
Special £ Report 9 31st March 1949  
Donkey Boiler Fee £ : When received,  
Travelling Expenses (if any) £ : - 19-



Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute NEW YORK MAY 25 1949

Assigned LMC-12.48