

Attach to Nautis Report 1529 of June 1927.

Rpt. 4b

AUXILIARY  
REPORT ON OIL ENGINE MACHINERY.

No. 7334.

Received at London Office 16 SEP 1926

Date of writing Report 14<sup>th</sup> September 1926. When handed in at Local Office

Port of Copenhagen

No. in Survey held at Copenhagen

Date, First Survey 6<sup>th</sup> April

Last Survey 12<sup>th</sup> August 1926

Reg. Book.

Number of Visits 28.

Single  
on the Twin }  
Triple }  
Quadruple }  
Motor  
Screw vessel

Benjamin Franklin

N<sup>o</sup> T-5.

Tons { Gross ✓  
Net ✓

Built at Saint Nazaire

By whom built Chantier et Ateliers de l'Industrie.

Yard No. T-5

When built 1927/6.

Engines made at Copenhagen

By whom made Akt. Burmeister & Wain's  
Machin. of Trapsøgers.

Engine No. 1259  
1250  
1251

When made 1926

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power 150 each engine.

Owners

Fred Olsen & Co

Port belonging to

Olo

Nom. Horse Power as per Rule

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

AUXILIARY

IL ENGINES, &c.—Type of Engines Vertical Auxiliary Diesel Oil Engines (3 off) 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 310 mm Length of stroke 350 mm No. of cylinders 3 on each. No. of cranks 3 on each.

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 2725 kg. Means of ignition Air compression Kind of fuel used crude oil, flash point above 150°F.

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth shrunk Thickness parallel to axis Mid. length thickness Thickness 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

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 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

Boiling 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

Holds, &c.

Dependent 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

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

How are they protected

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

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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. 3 off No. of stages 3 Diameters 3 1/8", 2 1/2", 7/8" Stroke 220 Driven by Aux. Diesel engines.

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

Reversing Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule 161.6 mm as fitted 162.0 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces

Are there a drain arrangement fitted at the lowest part of each receiver Yes

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

Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 65-75 tons per sq. inch Working pressure by Rules 65 atm.

Receiving 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

W340-0098 Foundation



*If so, is a report now forwarded?*

*Receivers.*

### Separate Tanks

### Donkey Boilers.

## General Pumping Arrangements

## Oil Fuel Burning Arrangements

## SPARE GEAR

The foregoing is a correct description,

MASTEN OG SKIBSBYGGERI

Manufacturer

Dates of Survey while building	During progress of work in shops -	6, 23 April, 3, 4, 5, 10, 11, 20, 25, 26 May, 1, 3, 8, 11, 15, 16, 18, 19, 22, 24, 28, 29 June, 2, 5, 7, 20 July, 8, 12 August 1926.
	During erection on board vessel -	✓
	Total No. of visits	28.

Dates of Examination of principal parts—Cylinders <sup>4/5, 10/5, 20/5</sup> and — Covers <sup>26/5, 19/6, 26</sup> Pistons <sup>5/5, 11/5, 25/5, 26</sup> Rods ✓ Connecting rods <sup>6/4, 23/4, 3/5, 10/5, 26</sup>

Crank shaft  $18 \frac{9}{16}$   $\frac{23}{16}$   $\frac{10}{16}$   $\frac{1}{16}$   $\frac{9}{16}$  26 Flywheel shaft *See crank 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 shafts Material *S.M.I. Steel* Identification Mark *8/30. K. B-6-26* Flywheel shaft, Material *See crank shafts* Identification Mark

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

Tube shaft, Material ☒ Identification Mark ☒ Screw shaft, Material ☒ Identification Mark ☒

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

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 3 Auxiliary Diesel oil engines as above described have been constructed under Special Survey and in accordance with the Rules, the approved plan and requirements contained in the Secretary's letter E. dated the 20<sup>th</sup> May 1926.

The material used in construction of the engines and the air receivers has been tested as required by the Rules, either by us or as per certificates produced. — (The certificates of tests were forwarded to you on the 1<sup>st</sup> instant.)

The engines and their accessories have been tested under full power working condition on the test bench in shop and found to work satisfactorily. —

These auxiliary oil engines have been fitted onboard the M. S. Benjamin Franklin and N° 7<sup>5</sup> in accordance with the Rules and are now in good working condition.  
(Report on this vessel No 1529) Give Range

Good Paint Months 22/6/27

The amount of Entry Fee ... £	:	:	When applied for,
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Special ... .. *\$300.00* : *1st June* 19*22*

Donkey Boiler Fee	...	£	:	:	When received,
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Travelling Expenses (if any) £ : : 1911 192

Committee's Minute

*Assigned*

*Certificate (if required) to be sent to*