

REPORT ON OIL ENGINE MACHINERY.

No. 9647.

Received at London Office

-6 JUL 1935

Writing Report 26 June 1935 When handed in at Local Office

Port of Copenhagen

Survey held at Copenhagen

Date, First Survey 13th August 1934 Last Survey 20th June 1935

Number of Visits 70

Tons Gross 9109.35
Net 5543.37

on the Single Tank Screw vessel "PETTER"

Copenhagen

By whom built Aht. Burmeister & Wain's
Haskin-og Skibbyggeri

Yard No. 613 When built 1935

made at Copenhagen

By whom made The builders

Engine No. 2340 When made 1935

Boilers made at Copenhagen

By whom made The builders

Boiler No. 1884 When made 1935

Horse Power 2 x 1850

Owners P. Jensen Rederi III

Port belonging to Arendal

Horse Power as per Rule 84 807

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

for which vessel is intended Carrying Petroleum in bulk. Ocean trade.

ENGINES, &c. Type of Engines Vertical Diesel oil engines, 2 or 4 stroke cycle 2 Single or double acting single

m pressure in cylinders 49 kg/cm² Diameter of cylinders 500 mm Length of stroke 900 mm No. of cylinders 2 x 6 No. of cranks 2 x 6indicated Pressure 6.8 kg/cm² 194 500 mm 352 2 x 6 2 x 6

bearings, adjacent to the Crank, measured from inner edge to inner edge 696 mm Is there a bearing between each crank yes

ons per minute 145 Flywheel dia. 1320 kgm² Weight 5000 kgm² Means of ignition compression Kind of fuel used crude oil

Shaft, dia. of journals as per Rule 326 mm as fitted 340 mm Crank pin dia. 115 mm central hole crank Webs Mid. length breadth 800 mm shrunk Thickness parallel to axis 208 mm

as per Rule 116 mm central hole as fitted 188 mm Mid. length thickness 188 mm Thickness around eye hole 165 mm

eel Shaft, diameter as per Rule 9.53" as fitted 9.75" Thrust Shaft, diameter at collars as per Rule 254 mm as fitted 300 mm

Shaft, diameter as per Rule 10.5" as fitted 10.75" Is the shaft fitted with a continuous liner yes

e Liners, thickness in way of bushes as per Rule 0.62" as fitted 0.75" Thickness between bushes as per rule 0.47" as fitted 0.5" Is the after end of the liner made watertight in the

er boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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 yes

o 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 4'-1"

eller, dia. 12'-0" Pitch 9'-3" No. of blades 3 Material bronze whether Moveable no Total Developed Surface 34 sq. feet

od of reversing Engines kind reversible Is a governor or other arrangement fitted to prevent racing of the engine when decelerated yes Means of lubrication

ed Thickness of cylinder liners 36 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

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

ing Water Pumps, No. 2 off - 120 lpm each Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

e Pumps worked from the Main Engines, No. 2 off Diameter 150 mm Stroke 175 mm Can one be overhauled while the other is at work yes

ps connected to the Main Bilge Line No. and Size 2 off engine bilge pumps 2 bilge & sanitary pumps 1 Ballast pump duplex 7 1/2" x 10 1/2" x 12"

How driven 27 lpm each electrically by steam.

e 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

gements

ast Pumps, No. and size 1 off duplex 7 1/2" x 10 1/2" x 12" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 off 95 lpm each

two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

ps, No. and size:—In Machinery Spaces 3 off 3 1/2" From coffee dam 2 off 1 1/2" (on oil fuel suction line In Pump Room 1 off 3 1/2"

olds, &c. 2 off 2 1/2" after coffee dam 1 off 3" forward coffee dam 1 off 3 1/2" Forward pump room 1 off 2" Forward deck 1 off 1 1/2"

ependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 off 3" (bilge pumps) 1 off 8" (Ballast pumps)

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 valves

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

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

at pipes pass through the bunkers none How are they protected

at pipes pass through the deep tanks none 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

he 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

partment to another yes Is the Shaft Tunnel watertight not known Is it fitted with a watertight door worked from

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

in Air Compressors, No. No. of stages Diameters Stroke Driven by

xiliary Air Compressors, No. 2 off No. of stages 2 Diameters 280 - 250 mm Stroke 190 mm Driven by Auxiliary engine

all Auxiliary Air Compressors, No. 1 off No. of stages 2 Diameters 75 - 30 mm Stroke 95 mm Driven by steam

avenging Air Pumps, No. 2 off rotary type Diameter Cap. 2 x 88 m³ Stroke per minute Driven by main engine

xiliary Engines crank shafts, diameter as per Rule 130 mm as fitted 150 mm No. 2 off Position Engine room floor level P.S.

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*

EMERGENCY High Pressure Air Receivers, No. *1 off* Cubic capacity of each *100 litres* Internal diameter *305 mm* thickness *6.5 mm*

Seamless, lap welded or riveted longitudinal joint *seamless* Material *Stainless Steel* Range of tensile strength *28-32 tons* Working pressure by Rules *38 kg/cm²* Actual *28 ATM.*

Starting Air Receivers, No. *1 off* Total cubic capacity *350 cbf.* Internal diameter *6'* thickness *1 3/16"*

Seamless, lap welded or riveted longitudinal joint *3 riveted* Material *S. Cl. Steel* Range of tensile strength *28-32 tons* Working pressure by Rules *27.2 kg/cm²* Actual *25 ATM.*

IS A DONKEY BOILER FITTED? *yes 2 off* 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 Shuffling (If not, state date of approval) *yes* Receivers *yes* Separate Fuel Tanks *yes*

Donkey Boilers *yes* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*

Oil Fuel Burning Arrangements *no*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied *1 Spare propeller shaft & 2 cast iron spare propellers.*

The foregoing is a correct description,

AKRESELSKABET
p. pa. **BURMEISTER & WAINSKIN-OG SKIBSBYGGERI**

Manufacturer.

Dates of Survey while building: During progress of work in shops - Aug: 13, 21, Sept: 4, Oct: 14, 19, 23, 30, Dec: 4, 8, 15, 21, 28, 31, 1934 Jan: 27, 8, 10, Feb: 4, 13, 21, March: 1, 4, 6, 7, 8, 11, 23, 24, April: 5, 8, 10, 23, 27, 29 May: 2, 4, 6, 7, 8, 9, 13, 14, 18, 21, 25, 1935
During erection on board vessel - Feb: 29 March 29, 30, April: 1, 11, 16, 26, 30 May 7, 8, 10, 15, 22, 23, 27, 29, 31 June: 1, 8, 12, 14, 15, 17, 20.
Total No. of visits *70.*

Dates of Examination of principal parts—Cylinders *29/2-5-9/5* Covers *29/3-8/4-23/4-2/5* Pistons *4/2-13/2-4/3-4/3* Rods *3/12-10/1-4/3* Connecting rods *3/12-10/1-4/3*

Crank shaft *8/1-2/2-8/3* Flywheel shaft *18/2-8/1-10/1-2/2-8/3* Thrust shaft *18/2-8/1-10/1-2/2-8/3* Intermediate shafts *19/1-30/1-4/2-30/3* Tube shaft *19/1-30/1-4/2-30/3*

Screw shaft *14/1-23/1-4/2-6/2-30/3* Propeller *7/5-8/5* Stern tube *29/3-8/3-16/4* Engine seatings *26/4-30/4* Engines holding down bolts *27/5-31/5*

Completion of fitting sea connections *1/4-16/4-8/5* Completion of pumping arrangements *26/4-30/4-12/6-14/6* Engines tried under working conditions *17/6-20/6*

Crank shaft, Material *S. Cl. S. Steel* Identification Mark *21.2.35* Thrust shaft, Material *S. Cl. S. Steel* Identification Mark *21.2.35* Intermediate shafts, Material *S. Cl. S. Steel* Identification Marks *4.30.3.35*

Tube shaft, Material *S. Cl. S. Steel* Identification Mark *21.2.35* Screw shaft, Material *S. Cl. S. Steel* Identification Mark *3.10.4.35*

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 *yes* If so, have the requirements of the Rules been complied with *yes*

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *yes*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *1/5 MOSVOLD B.M. YARD NO 612*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above machinery and its accessories*

has been constructed and fitted on board under Special Survey in accordance with

the Rules, the approved plans and the requirements contained in the Surveyor's letter E

dated 4/6-14/8-29/8-31/8-2/11-34 & 1/4-35. The material used in construction has been tested

as required by the Rules either by us or as per certificates issued by surveyors to this

Society. The workmanship is of good description throughout.

On completion the whole installation including the cargo oil pumping arrangement

with boiler &c. was tested under working conditions and found to work satisfactorily

and on the trial trip the maneuvering of the engines was tested and found good.

Maximum speed 13.4 knots, corresponding IHP = 4720. Interim certificate issued as per copy

*Recommend the vessel's machinery to have notation of **L.M.C.-6.35 OIL ENGINES***

C.L. and 2 D.B. 180 lb.

The amount of Entry Fee *£ 134.40* When applied for, *5.7.19.35*

Special *£ 2588.02* When received, *26.8.19.35*

STARTING AIR RECEIVER *£ 94.08*

FITTING Donkey Boilers Fee *£ 30.00*

Travelling Expenses (if any) *£ 17.50*

Committee's Minute *FRI. 12 JUL 1935*

Assigned *+ L.M.C. 6.35 Oil Engines*

2 D.B.-180 lbs.

FRI. 23 AUG 1935

FRI. 28 FEB 1936

Lloyd's Register

Foundation

MULTITU

Slaps: The

Manufacturer

Total Heating

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