

REPORT ON OIL ENGINE MACHINERY.

No. 11756.

25 AUG 1945

Received at London Office

1st August 1945

When handed in at Local Office

19

Port of

Copenhagen

Survey held at

Copenhagen and Odense

Date, First Survey

6 February 1940

Last Survey

8 July 1945

Number of Visits

65

1945

Single
on the
Triple
Quadruple

MOTOR

Screw vessel

KATRINE MÆRSK.

Gross 10043.07
Net 6096.87

at

Odense

By whom built

Odense Skibskonstruktør 7/5

Yard No. 88

When built

ines made at

Copenhagen

By whom made

7/5 Burmeister & Wain's Maskin-

Engine No. 3148

When made 1940

Key Boilers made at

Copenhagen

By whom made

7/5 Burmeister & Wain's Maskin-

Boiler No. 1974

When made

ce Horse Power

4620

Owners

7/5 Dampskibsselskabet "Fredericia"

Port belonging to

Fredericia

Horse Power as per Rule

653

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

yes

le for which vessel is intended

Carrying petroleum in bulk

ENGINES, &c. —Type of Engines

Heavy oil engine crosshead type solid ing. or 4 stroke cycle

Single or double acting

single

imum pressure in cylinders

49 kg/cm²

Diameter of cylinders

740 3/4

Length of stroke

1500 1/2

No. of cylinders

8

No. of cranks

8

Indicated Pressure

8.55 kg/cm²

of bearings, adjacent to the crank, measured from inner edge to inner edge

1006 3/4

Is there a bearing between each crank

yes

utions per minute

115

TURN.

Flywheel dia.

60 2/4

2 BALANCE

Weights 60 2/4

Means of ignition

Compression

Kind of fuel used

Heavy oil

dia. of journals

502 3/4

as per Rule

525 3/4

Crank pin dia.

525 3/4

Crank webs

Mid. length breadth

1000 3/4

Thickness parallel to axis

310 3/4

as fitted

525 3/4

as fitted

185 3/4

CENT. HOLE

365 3/4

Mid. length thickness

300 3/4

shrink

Thickness around eyehole

282.5 3/4

heel 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

383 3/4

400 3/4

Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

408 3/4

Is the

shaft fitted with a continuous liner

yes

yes

ze Liners, thickness in way of bushes

as per Rule

as fitted

19.8 3/4

Thickness between bushes

as per Rule

as fitted

16 3/4

Is the after end of the liner made watertight in the

ller boss

yes

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

yes

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-

sive

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

tube shaft

If so, state type

Length of bearing in Stern Bush next to and supporting propeller

1900 3/4

eller, dia. 5330 3/4 Pitch 357 1/4 No. of blades 4 Material Cast iron whether moveable No Total developed surface 10.66 sq. feet

od of reversing Engines direct reversal a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of

ation forced Thickness of cylinder liners 53.5 3/4 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

ged with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

to the engine funnelled Cooling Water Pumps, No. 1 off 190 Js/Hour Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Pumps worked from the Main Engines, No. 1 Diameter 165 3/4 Stroke 230 3/4 Can one be overhauled while the other is at work yes

is connected to the Main Bilge Line No. and size 1 off 165 Js/H. (ballast), 1 off 30 Js/H. (bilge), 1 off 23 Js/H. (bilge)

How driven steam steam main engine

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

ements

t Pumps, No. and size 1 off 165 Js/Hour Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 off 190 Js/Hour

no independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size:—In machinery spaces 5 off 3 1/2" - 1 off 3 1/2" hose connection - 1 off 3" MAIN 1 off 6" - 1 off 8"

ds, &c. FORE HOLD: 2 off 3" - FOR COFFERD: 1 off 4" - AFT COFFERD: 1 off 6" "Fore - - - 1 off 3"

endent Power Pump Direct Suctions to the engine room bilges, No. and size 1 off 6" 1 off 4"

l the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction pipes in the machinery spaces led from easily

ible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

l Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks. Valves except both blow off cocks Are they fixed

ntly 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

ey 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

pipes pass through the bunkers None How are they protected

pipes pass through the deep tanks None Have they been tested as per Rule

l pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

or from one compartment to another yes Is the shaft tunnel watertight

Is it fitted with a watertight door

worked from

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

Air Compressors, No. 2 No. of stages 2 diameters 2 x 160 3/4 stroke 150 3/4 driven by steam eng.

ary Air Compressors, No. No. of stages diameters stroke driven by

all Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

at provision is made for first charging the air receivers The steam driven air compressor

PERCHARGING AIR BLOWERS

enging Air Pumps, No. 2 diameter rotary stroke 2 x 111 3/4 1/2 driven by main engine

iliary Engines crank shafts, diameter 2 71.5 3/4 64 3/4 No. 1 off hung at 1 off hung at 1 off steam

as fitted 75 3/4 20 3/4 Position motor room prop. space motor room

ve the auxiliary engines been constructed under special survey 5 yes Is a report sent herewith

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Port of Copenhagen Continuation of Report No. 11786 dated 2nd August 1945 on the
Steel Single Screw Motor Vessel KATRINE MÆRSK of Fredericia
Yard No 88 by Odense Skibskibs værft 7/8.

AUXILIARY MACHINERY.

NO	DESCRIPTION	TONS/HOUR.	DIMENSIONS		WORKED BY.
1	cooling water pump	190		2 pistons	main engine
1	lubricating oil pump	190		2 pistons	" "
1	bilge pump	23		1 piston	" "
1	sanitary pump	23		1 piston	" "
1	ballast pump	165	9" x 12" x 10"	duplex	steam.
1	bilge pump	30	6" x 6" x 6"	— " —	— " —
1	sanitary pump	30	6" x 6" x 6"	— " —	— " —
1	spare lubricating oil pump.	165	9" x 12" x 10"	— " —	— " —
2	starting air compressor	2.5 $\frac{3}{4}$ H.P.	2 x 160 $\frac{1}{4}$ x 1 x 100 $\frac{1}{4}$.		— " —
2	steam engines for do		180 $\frac{1}{4}$ x 140 $\frac{1}{4}$.		— " —
1	steam engine for dynamo		7" x 5"		— " —
1	boiler oil transfer pump	9	4 $\frac{1}{2}$ " x 4" x 4"	— " —	— " —
1	oil fuel transfer pump	30	6" x 6" x 6"	— " —	— " —
2	donkey boiler feed pumps	9.4			
1	fresh water pump	2.8	3 $\frac{1}{2}$ " x 2 $\frac{1}{8}$ " x 3 $\frac{1}{2}$ "	duplex	— " —
2	pressure pumps for oil burning		130 $\frac{1}{4}$ x 70 $\frac{1}{4}$ x 125 $\frac{1}{4}$.		— " —
2	heaters for do.		2 x 2.77 π^2		— " —
1	steam engine for boiler fan		100 $\frac{1}{4}$ x 60 $\frac{1}{4}$.		— " —
2	cargo oil pumps	400	20" x 14" x 24"	duplex	— " —
1	drain pump	100	10" x 10 $\frac{1}{4}$ x 10"	— " —	— " —
1	ballast pump (from pump room)	30	6" x 6" x 6"	— " —	— " —
1	oil fuel transfer pump	30.	6" x 6" x 6"	— " —	— " —
1	oil fuel purifier				3.2 H.P. electric motor
1	lubricating oil purifier				3.2 H.P. " —
1	deep water pump				2.5 H.P. " —
1	workshop				4 H.P. " —
1	engine turning gear.				8 H.P. " —

The above is a correct description.

Odense Staalakibavært A/

Emilio L. Law
Engineer Surveyor to Lloyd's Register of Ships

AIR RECEIVERS:—Have they been made under survey..... *yes* ✓ 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* ✓ Is a drain fitted at the lowest part of each receiver..... *yes* ✓

Injection Air Receivers, No..... ✓ 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..... *1* ✓ Total cubic capacity..... *22 4* ^{*3*} ✓ Internal diameter..... *18 30-18 7 1/2* ✓ Thickness..... *2 4 1/4* ✓

Seamless, lap welded or riveted longitudinal joint..... *riveted* ✓ Material..... *S.M. Steel* ✓ Range of tensile strength..... *END 503-506 1/2* ✓ Working pressure..... *THEL 507-52 0* ✓ Actual..... *2 5* ✓

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 No

PLANS. Are approved plans forwarded herewith for shafting..... *yes* Receivers..... *yes* Separate fuel tanks.....
(If not, state date of approval)
Donkey boilers..... *yes* General pumping arrangements..... *yes* Pumping arrangements in machinery space..... *yes*
Oil fuel burning arrangements..... *yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied. *Yes*
State the principal additional spare gear supplied. *1 propeller shaft without lower Diameter at top of cone 408*
These are plan approved at Copenhagen. The shaft has been approved for use in an emergency for a limited period.

The foregoing is a correct description,

AKTIESELSKABET
BURMEISTER & WAIN'S MASKIN- OG SKIBSBYGGER
[Signature]
Manufacturer.

[illegible]

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

Description of fire extinguishing apparatus 7 ft portable foam extinguisher 12 lb each 6 ft CO₂ do 12 lb each


Steam in engine room, boiler room, pump room, cargo hold, cargo tank

"Ebbesen's" foam producing and pumping aggregate 1000 lb net weight

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 Caroline Massé, Odessa Yard No

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery has been constructed and fitted under special survey in accordance with the Rules, the approved plans and the Secretary's letter E dated 23/6-1939-24/6-28/8-1939, 3/11-23/2-1940. The material used has been tested as required by the Rules and the workmanship is good. On completion the machinery was tested under working conditions and the manoeuvring tested and found satisfactory.

The interim certificate issued as per copy enclosed.
Recommend the vessel's machinery to have installation of  LMC with a date to be fixed
by the Committee, London, OIL ENGINES, CL, 2 DB 180 to

The amount of Entry Fee ... *Rs. 135.00* }
 Special ... *Rs. 2433.60* } When applied for *3/17* 19*45*
1 STARTING AIR RECEIVER *Rs. 100.00* }
 Donkey Boiler Fee... *Rs. 658.80* } When received 19
FITTING - " - " - " *Rs. 350.00* }
 Travelling Expenses (if any) *Rs. 470.70* }
Sunday fee *Rs. 50.00* }
 (Committee's Minute *FRI. 11 JAN 1946*
 Assigned *+ L.M.C. 7,45 Subject*
to Ena Ch LDB-1506