

REPORT ON OIL ENGINE MACHINERY.

13368
No. 22 FEB 1951

Received at London Office

Date of writing Report 12-2-1951 When handed in at Local Office 19 Port of Copenhagen
No. in Survey held at Copenhagen / Odense Date, First Survey 16-12-49 Last Survey 12-1-1951
Reg. Book. Number of Visits 49
Single on the Twin Triple Quadruple Screw vessel Motor Tanker "Charlotte Maersk" Tons Gross 7901
Built at Odense By whom built Odense Staalskeleværstøt Yard No. 112 When built 1951
Engines made at Copenhagen By whom made Akt. Burmeister & Wain Engine No. 4511 When made 1951
Donkey Boilers made at Gallborg By whom made Gallborg Værstøt a/s Boiler No. 1144 When made 1951
Brake Horse Power 4600 Owners A/S D/S Sundborg, D/S of 1912 a/s Port belonging to Fredericia
M.N. Power as per Rule 799800 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended Ocean going

OIL ENGINES, &c. — Type of Engines Heavy Oil Solid Injection 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 298 mm Length of stroke 1600 mm No. of cylinders 5 No. of cranks 5
Mean Indicated Pressure 6.5 kg/cm² Ahead Firing Order in Cylinders 1-4-3-2-5 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 958 mm
Flywheel dia. 902 FLYWHEEL Is there a bearing between each crank Yes Revolutions per minute 115
Weight Moment of inertia of flywheel (lbs. in² or Kg. cm²) 40220 Means of ignition Comp. Kind of fuel used Diesel
Crank Shaft, Solid forged dia. of journals as per Rule 485 mm Crank pin dia. 55 mm Crank webs Mid. length breadth 1020 mm Thickness parallel to axis 280 mm
Semi built as fitted 550 mm WITH 220 mm CEN. HOLE Mid. length thickness 280 mm Thickness around eye hole 290 mm
All built as per Rule 355 mm Thrust Shaft, diameter at collars as fitted 373 mm
Flywheel Shaft, diameter as fitted 360 mm
Tube Shaft, diameter as per Rule 400 mm Is the (tube) shaft fitted with a continuous liner Yes
Screw Shaft, diameter as fitted 385 mm of couplings as per Rule 14.3 mm
Bronze Liners, thickness in way of bushes as fitted 21.22 mm Thickness between bushes as fitted 18 mm 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 One length
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 No
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 tube shaft No
If so, state type Length of bearing in Stern Bush next to and supporting propeller 1600 mm
Propeller, dia 5100 mm Pitch Var. No. of blades 4 Material M. Bronze whether moveable No Total developed surface 9.45 sq. feet
Moment of inertia of propeller (lbs. in² or Kg. cm²) Kind of damper, if fitted No
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced
Thickness of cylinder liners 5.2 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lapped
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 2BW (1FW + 1SW ME) (1FW 2nd Ballast pump space)
Cooling Water Pumps, No. 2FW 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. 1 Diameter 150 mm Stroke 175 mm Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and size 1 @ 144 ton/hr 1 @ 30 ton/hr 1 @ 20 ton/hr
How driven Steam Chain drive to shafting
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 @ 144 ton/hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 - 140 ton/hr
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 6 @ 3 1/2" In pump room 2 @ 7" For 2 @ 3"
In holds, &c. Forward hold 2-3"
Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1-6 1-4
Are all 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 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 Both Are they fixed efficiently 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 Both
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
That pipes pass through the bunkers How are they protected
That 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 one compartment to another Yes 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. 2 No. of stages 2 diameters 2.5 m³/min stroke driven by Steam
Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 2.5 m³/min stroke driven by Steam
Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
What provision is made for first charging the air receivers Steam driven compressors
Scavenging Air Pumps, No. 2 diameter 115 mm stroke 105 mm driven by
Auxiliary Engines crank shafts, diameter as per Rule 115 mm Journals 115 mm Pins 105 mm Position 1 Port 1 Starboard side of Eng. Room
Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes

012036-012041-0152 1/2

The foregoing is a correct description.

Manufacturer

AKTIESELSKABET
BURNEISTER & WAIN'S MASKIN- OG TÆBSBYGGERI

9/11/1981

Welded receivers, state Makers' Name.

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Also steam smothering in E.R.T.B.R.

Description of fire extinguishing apparatus fitted

Eng. Rm. 4 2 Gallifort units & 1 skunk kenn Elkhammer system
By P. 2 2 " " " " " " " "

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.....*No*.....If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed and installed on board under special survey in accordance with the Rules, approved plans and the Secretary's letter dated 1/12/55 1 1/2 1/3 1/5 29/1/57. The materials used have been tested as required by the Rules and the workmanship is good. The machinery has been satisfactorily tested under full working conditions and in our opinion the vessel is eligible to be classed with Records of * L.M.C. 1, 51 "Oil Engine" (3) D.B. 180 lbs/sq. inch and T. 5 1/2 C.T. 2 - both for beam.

A notice board has been posted at the control station stating that the engine is not to be operated continuously between 52-62 P.M.

The amount of Entry Fee ...	Kr 692	:
AIR Rec.	Kr 200	:
Special ... PUTADS ...	Kr 350	:
INST. Donkey Boiler Fee...	Kr 323	:
Travelling Expenses (if any)	Kr 187	:

17/2
When applied for 19 51
Lt. Comm. W. Russell
When received 19 _____
Engineer Surveyor to Lloyd's Register of Shipping.

(The Committee's Minute TUES. 13 MAR 1951

Assigned + LMC 1.51 Qld Eng.

C.L. 2DB 180/b (with endorsement)

Rpt. 9a

Port of *Copenhagen*

Continuation of Report No.

dated 12-2-51

on the

Motor Tanker "Charlotte Maersk"

List of auxiliaries in Engine and boiler room

No	Description	Size	Driven by	Capacity
1	S.W. cooling pump		Chain Drive	170 t/hr
1	F.W. cooling pump		Main Motor	170 t/hr
1	Sub. oil cooling pump		"	170 t/hr
1	Bilge pump		"	20 t/hr
1	Sanitary pump		"	20 t/hr
1	Span Sub. oil pump	9" x 12" x 10"	Steam	144 t/hr
1	Span F.W. cooling pump	9" x 12" x 10"	"	144 t/hr
1	Ballast & Span S.W. cooling pump	9" x 12" x 10"	"	144 t/hr
1	Butterworth pump	14" x 9" x 12"	"	
1	Header for Butterworth system	16 m ²		
1	Bilge pump	6" x 6" x 6"	"	30 t/hr
1	Sanitary pump	6" x 6" x 6"	"	30 t/hr
1	Diesel oil transfer pump	6" x 6" x 6"	"	30 t/hr
1	Boiler oil transfer pump	4 1/2" x 4" x 4"	"	9 t/hr
2	Boiler feed pumps	7 1/2" x 5 1/2" x 15"		9 t/hr
1	Boiler circulating pump		Electric	200 lit/min
1	Fresh water pump	3 1/2 x 2 3/8 x 3 1/2"	Steam	3 t/hr
2	Starting air compressor	C.S. 17	"	2.5 m ³ /min
1	Lar engine for oil burning	H 2"	"	12000 m ³ /hr
1	Double oil burning plant		"	
1	Condenser			1000 sq. ft.
1	Evaporator			12 t/24 hrs.
1	Starting air receiver			18 m ³
1	Sub. oil cooler			180 m ²
1	F.W. cooler			180 m ²
1	Sub. oil pump		Electric	3300 lit/hr.
1	Diesel oil pump			5000 lit/hr.
1	Span oil pump			3300 lit/hr
2	Boiler oil settling tanks			2 x 5000 lit
2	Diesel oil			2 x 12500 lit
2	Oil fired boiler			2 - 150 m ²
1	Exhaust gas boiler			1 - 125 m ²

Generators

2 off	44 KW	Diesel engine driven
1 off	20 KW	Steam driven for Harbour use
1 off	10 KW	Oil engine driven for Emergency use situated on steering engine flat

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Foundation

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